



U.S. Department of Energy

National Energy Technology Laboratory



February 6, 2001

FINANCIAL ASSISTANCE SOLICITATION, NUMBER DE-PS26-01NT41104

Power Plant Improvement Initiative

To: ALL PROSPECTIVE APPLICANTS

The Department of Energy (DOE) is announcing a new initiative geared toward improving the reliability of the U.S. electrical power system. This program, the Power Plant Improvement Initiative, involves demonstrations of advanced technologies to increase the efficiency, lower the emissions, and improve the economics and overall performance of coal-fired electric power plants. As part of this initiative, the DOE's Office of Fossil Energy, through its National Energy Technology Laboratory (NETL), is soliciting applications for cost-shared projects.

Through the Power Plant Improvement Initiative solicitation, DOE is seeking projects to demonstrate advanced coal-based technologies that can be applied to improve the performance of existing and new electric power plants, including such plants that may also be capable of producing some combination of heat, fuels, chemicals or other useful byproducts. DOE does not want to demonstrate technologies that have been demonstrated previously. Rather, we are looking for technologies that offer the potential for achieving significant, not marginal, improvements in power plant performance. Improved performance includes increasing the efficiency of electricity production and reducing environmental impacts associated with air pollutants, carbon dioxide, water usage, and/or solid waste generation. Proposed technologies should also improve the cost-competitiveness of coal-fired power generation to levels well beyond the capabilities of both existing capacity and technologies already demonstrated. Of particular interest are subsystems, components, and modules capable of achieving the objectives of the Power Plant Improvement Initiative. If the technology demonstrated is intended for existing coal power plants, it should be applicable to a large portion of such plants. The scale of proposed projects must be large enough to prove the viability of the technology in commercial applications that can be deployed over the next few years.

The solicitation will be open for application submission until April 19, 2001. Any resultant awards are expected to be cooperative agreements and will require at least 50% cost sharing. Specific aspects related to (1) areas of interest, (2) application evaluation, (3) application preparation instructions, (4) projected funding (including cost-sharing requirements), and (5) the timing sequence for application submissions, review, selection, and award of financial assistance instruments, can be found in the attached solicitation.

A public "pre-application conference" for this solicitation will be held on February 15, 2001 between 10:00am and 2:00pm at NETL's facility in Morgantown, WV. Live audio coverage of this session will also be provided at NETL's Web Site "<http://www.netl.doe.gov/>." Interested parties may participate in this session either in-person or electronically; however, if you plan to participate electronically by webcast, please pre-register on our web site before February 15, 2001. As further information on this session becomes available, it will be posted on NETL's web site. NETL also intends to post a synopsis of the session by February 22, 2001. Responses to all written questions submitted to the Contract Specialist will also be posted within 10 calendar days of their submittal provided such questions are received 15 calendar days prior to the application due date. Interested parties are encouraged to periodically check the NETL web site for information on the Power Plant Improvement Initiative.

While this letter highlights some important elements of the solicitation, it is not an integral part of the solicitation. In the event of any conflict between the contents of this letter and the enclosed solicitation, solicitation language will prevail.

All communications concerning this solicitation must be in writing, should cite the Program Solicitation number, and be directed by mail, e-mail or fax to the Contract Specialist, Ms. Jo Ann C. Zysk, “**zysk@netl.doe.gov**” or (412) 386-6137 respectively.

Sincerely,

William R. Mundorf
Contracting Officer
Acquisition and Assistance Division

SECTION I -- INTRODUCTION	1
A. Summary	1
B. Background Information	1
C. Solicitation Objectives	1
SECTION II -- PROGRAM AREA OF INTEREST	3
SECTION III -- CONDITIONS AND NOTICES	5
A. Applicant Eligibility	5
B. Number and Type of Awards	5
C. Solicitation Definitions	5
D. Availability of DOE Funds	6
E. Availability of Applicant Funds	6
F. Project Performance Period	6
G. Reporting Requirements	6
H. Property Management and Disposition	6
I. Cost Sharing	6
J. Cost Overruns	7
K. Application Preparation Costs	7
L. Commitment of Public Funds	8
M. Pre-Application Conference	8
N. False Statements	8
O. DOE Issuing Office	8
P. Amendment of the Solicitation	8
Q. Catalog of Federal Domestic Assistance Number	8
R. Time, Date and Place Applications Are Due	8
S. Application Delivery Information	9
T. Telegraphic and E-Mail Applications	9
U. Late Applications, Amendments of Applications and Withdrawals of Applications	9
V. Small and Small Disadvantaged Business	9
W. Determination of Responsibility	9
X. Treatment of Proprietary Information	9
Y. Unnecessarily Elaborate Applications	10
Z. Evaluation Personnel	10
AA. DOE Treatment of Application Information	10
BB. Application Clarification	10
CC. Award Without Discussions	10
DD. Government Right to Reject or Negotiate	10
EE. Anticipated Selection Date	10
FF. Notice of Award	10
GG. Application Acceptance Period	11
HH. Disposition of Applications	11
II. Presubmission Review and Clearances	11
JJ. Simpson-Craig Amendment	11
KK. Loans Not Available	11
LL. Unsuccessful Applications	11
MM. Notice Regarding Eligible/Ineligible Activities	11
NN. Additional Eligibility Requirements of the Energy Policy Act of 1992	11
OO. Performance of Work in the United States	12
PP. National Environment Policy Act Compliance	12
QQ. Pre-Selection Project-Specific Environmental Questionnaire	12
RR. Post-Selection Environmental Review	13
SS. Post-Award Environmental Monitoring	13
TT. Notice of Right to Request Patent Waiver	13

UU.	U. S. Competitiveness Provision	13
VV.	Recovery of Government's Investment	13
WW.	Demonstration Facility Site Availability	14
SECTION IV -- APPLICATION PREPARATION INSTRUCTIONS		15
A.	Application Requirements	15
B.	Overall Arrangement of Application	15
C.1	Volume I - Business and Financial Application	15
C.2	Volume II - Technical Application	20
SECTION V-- EVALUATION AND SELECTION		24
A.	Introduction	24
B.	General	24
C.	Preliminary Evaluation	24
D.	Technical Evaluation Criteria	24
E.	Funding and Financial Information Evaluation Criteria	25
F.	Budget Information Evaluation Criteria	26
G.	Environmental, Health & Safety Evaluation Criteria	26
H.	Program Policy Factors	26
I.	Importance of Evaluation Criteria	26
J.	Basis For Selection and Award	26
SECTION VI -- ELECTRONIC FORMS AND/OR DOCUMENTS		27
SECTION VII -		A-1
Attachment A -	Model Cooperative Agreement	A-1
Attachment B -	Model Repayment Agreement	B-1

POWER PLANT IMPROVEMENT INITIATIVE

SECTION I -- INTRODUCTION**A. Summary**

The United States Department of Energy, National Energy Technology Laboratory (DOE/NETL, or DOE) is competitively soliciting applications for a requirement titled "Power Plant Improvement Initiative".

The Power Plant Improvement Initiative seeks to improve electricity reliability by demonstrating commercially viable advanced coal-based technologies applicable to existing and new electric power plants including such plants that may also be capable of coproducing some combination of heat, fuels, or chemicals from coal.

This solicitation will be open to receive qualifying applications through April 19, 2001. Applications will be evaluated and selections made on or about August 22, 2001. However, funds cannot be obligated before September 30, 2001.

It is anticipated that a number of Cooperative Agreements will result from this solicitation. Total government funding is expected to be \$95 million. The minimum cost share by the industrial participant is 50%, and must be at least 50% in each project stage. In addition, the Government's investment is to be repaid over a 20-year period, based on sales and licensing of the technology demonstrated. Periods of performance for the projects are expected to be two to six years. Each project will be broken into three stages: Stage I-Design, Stage II-Construction, and Stage III-Operations.

B. Background Information

The Power Plant Improvement Initiative is an initiative of the U.S. Department of Energy's Office of Fossil Energy and is being implemented by the National Energy Technology Laboratory (NETL). The Power Plant Improvement Initiative is based on three premises: that we will need to rely on fossil fuels for a major share of our electricity, transportation fuel, and chemicals needs well into the 21st century; that it makes sense to rely on a diverse mix of energy resources, including coal, natural gas, oil, biomass, and so-called "opportunity" resources, rather than on a reduced subset of these resources; and that RD&D directed at resolving our energy and environmental issues can find affordable ways to make energy conversion systems meet strict environmental standards. Based on these premises, the goal of the Power Plant Improvement Initiative is to enhance the reliability of the coal-based electric power system in the United States through the demonstration and commercial replication of technological improvements in power plant performance.

The Clean Air Act of 1970 and subsequent amendments have brought about major reductions in emissions of the acid rain-producing gases, i.e., sulfur and nitrogen oxides, and particulate matter for new coal-fired power plants. Existing plants are increasingly being required to cut emissions further. Moreover, renewed concern about fine particulate matter (PM2.5) and its precursors (nitrogen and sulfur oxides), trace element emissions (especially mercury), hydrogen chloride, and ozone (and its nitrogen oxides precursor) have created new pressures for cleaner plants. These pressures are unlikely to ease in the future. Rather, these concerns and concerns over the increasing frequency of power supply disruptions, the threats these disruptions impose on our citizens and on grid reliability, and sharp increases in the electric bills of many Americans have provided impetus for this initiative to bring improved coal-based power systems to the market in the near term. By taking the lead in demonstrating the needed technology, we will not only meet the energy and environmental challenges we face, but at the same time make our economy stronger.

C. Solicitation Objectives

The objective is to improve electricity reliability and energy security in the United States and to reduce the environmental effects of coal-fired electric power generation. Through the Power Plant Improvement Initiative solicitation, DOE is seeking projects to demonstrate advanced coal-based technologies that can be applied to improve the performance of existing and new electric power plants, including such plants that may also be

capable of producing some combination of heat, fuels, chemicals or other useful byproducts. DOE does not want to demonstrate technologies that have been demonstrated previously. Rather, we are looking for technologies that offer the potential for achieving significant, not marginal, improvements in power plant performance. Improved performance includes increasing the efficiency of electricity production and reducing environmental impacts associated with air pollutants, carbon dioxide, water usage, and/or solid waste generation. Proposed technologies should also improve the cost-competitiveness of coal-fired power generation to levels well beyond the capabilities of both existing capacity and technologies already demonstrated. Of particular interest are subsystems, components, and modules capable of achieving the objectives of the Power Plant Improvement Initiative. If the technology demonstrated is intended for existing coal power plants, it should be applicable to a large portion of such plants. The scale of proposed projects must be large enough to prove the viability of the technology in commercial applications that can be deployed over the next few years.

SECTION II - PROGRAM AREA OF INTEREST

In the coming years, the surge in U.S. demand for electric power shows no signs of abating. Yet, in many regions, our expanding 21st century economy is being powered by an out-of-date and undersized electric power system. The result has been an increasing frequency of power supply disruptions and sharp increases in the electric bills of many Americans. For the sick and the elderly, access to reliable electricity can be a matter of life and death. Without reliable and affordable electric power, commercial and industrial businesses can grind to a halt. We risk short circuiting the continued expansion of digital commerce and e-business that are integral to economic prosperity.

More than half of our nation's electricity is currently supplied by coal, and for decades into the future, plentiful American coal will continue to provide low cost and reliable electricity. Coal-fired electric power is fundamental to the U.S. economy, domestic energy security, and the reliability of the U.S. electrical power system. As the U.S. electric industry transitions to a new and competitive business structure, the demands on coal-based electric generating facilities are changing. Advanced technologies are needed to increase the efficiency, lower the emissions, and improve the economics and overall performance of coal-fired electric power plants.

In the Power Plant Improvement Initiative solicitation, DOE is seeking projects to demonstrate advanced coal-based technologies that can be applied to existing and new power plants and that meet the objectives of increased efficiency, reduced emissions, and improved economics and overall performance. These power plants may also be capable of producing some combination of heat, fuels, and/or chemicals. Improved performance includes increasing the efficiency of electricity production and reducing environmental impacts associated with air pollutants, carbon dioxide, water usage, and solid waste generation. Air pollutants deemed to be of concern to this Power Plant Improvement Initiative include SO₂, NO_x, particulate matter, hydrogen chloride, and mercury and other air toxics. Carbon dioxide, or CO₂, reduction is also desired. Proposed technologies should also improve the cost-competitiveness of coal-fired power generation well beyond that which is in operation now or has been demonstrated to date. The scale of proposed projects should be large enough to prove the viability of future commercial projects. If the technology demonstrated is intended for existing coal power plants, it should be applicable to a large portion of such plants. Proposed technologies should also be mature enough to be ready for commercialization in the next few years. Of particular interest are subsystems, components, or modules capable of achieving the objectives of the Power Plant Improvement Initiative.

With this solicitation, DOE is seeking applications in any of the technical areas described below *or in any other area* that the applicant believes can make an important contribution to achieving the power plant improvement initiative program objectives. The inclusion of this list of sample technologies is not intended to preclude work on other technologies important to advanced coal based power generation.

- C Advanced combustion or gasification systems and components (warm/hot gas cleanup systems) that can be used to create new power plants or repower existing units,
- C Advanced NO_x control technology such as ultra low NO_x burners, advanced reburning, or selective catalytic reduction,
- C CO₂ capture, utilization or sequestration,
- C Combustion or gasification system improvements, including utilization of alternative fuels or coal fines,
- C Co-production, for example production of clean transportation fuels, high-value chemicals, or heat with electricity,
- C Fine particulate control including advanced particulate collection, separation technologies, or flue gas conditioning agents,

- C Hydrogen chloride control technologies,
- C Mercury control technology, including the injection of sorbents such as activated carbon or the addition of mercury capture reagents to wet scrubbers,
- C Process control systems that increase efficiency and or reduce emissions,
- C Reduction of solid and liquid discharges from power plants, or by-product utilization,
- C Repowering to increase capacity, increase efficiency, or reduce emissions of existing coal-based power plant facilities,
- C Steam cycle improvements, including boiler tubes, steam turbines, air cooler condensers,
- C Wet and dry scrubbers for SO₂ control, including significant advances in multi-pollutant removal.

For cost effectiveness, DOE believes it may be desirable to utilize existing facilities to the extent practicable for developing and demonstrating the proposed technologies.

SECTION III -- CONDITIONS AND NOTICES

A. Applicant Eligibility

Eligibility for participation in this Program Solicitation is considered to be full and open and all interested parties may apply, except as otherwise stated herein.

Applications submitted by, or relying upon the technical expertise of, Federally Funded Research and Development Centers (FFRDC) and (DOE) Management and Operating (M&O) contractors will not be eligible for an award under this solicitation.

Any non-profit or for-profit organization, university or other institution of higher education, or non-federal agency or entity is eligible to apply, unless otherwise restricted by the Simpson-Craig Amendment.

Applicants that are seeking financial assistance under this solicitation, are subject to the eligibility requirements of Section 2306 of the Energy Policy Act of 1992 (EPAAct).

B. Number and Type of Awards

It is anticipated that multiple awards will result from this solicitation. However, the Government reserves the right to fund, in whole or in part, any, all, or none of the applications submitted in response to this solicitation and will award that number of financial assistance instruments which serves the public purpose and is in the best interest of the Government. The Government intends to use cooperative agreements as the type of award instrument(s). A model cooperative agreement is found in Section VII, Attachment A. Clauses may be added or deleted while negotiating terms for the specific projects.

C. Solicitation Definitions

“Demonstration Facility” means the physical plant, equipment, and all other related facilities constructed and operated during the Demonstration Project.

“Demonstration Project” or “Project” means the complete set of activities described on the Statement of Work of any resulting Cooperative Agreement.

“Participant” or “Recipient” means the legal entity that is responsible for all aspects of Project performance under the Cooperative Agreement.

“Project Team means those organizations or parties responsible for proposing and accomplishing all phases of the Demonstration Project. The Project Team includes the prospective Participant, technology owners, and other third parties identified in this Application (excluding parties whose sole function is as a source of funds) who are essential to the successful completion of the proposed Demonstration Project. Where a legal entity has been or will be created to conduct the project, DOE will consider the participating organizations or parties (partners, joint venture members, etc.) As Project Team members.

“Selection” means the determination by DOE for certain proposed Demonstration Projects to proceed into negotiations leading to an Award.

“Stage” means the set of related tasks which taken together make up one of the three major categories of work under the Demonstration Project (design, construction, or operation).

“United States” means The United States of America and its 50 states, the District of Columbia, the Commonwealth of Puerto Rico, and any possession or trust territory of the United States.

D. Availability of DOE Funds

It is anticipated that DOE funds will be available for obligation to the selected award(s) after September 30, 2001.

E. Availability of Applicant Funds

It is required that applicant funds will be committed for selected projects prior to award of a cooperative agreement and no later than six months after selection.

F. Project Performance Period

The Government anticipates the project period for awards to be between two and six years depending on factors such as complexity of technology, scale of demonstration and degree of modifications at the project site. As noted in subsection E above, applicant funds for selected projects must be committed prior to award of a cooperative agreement. The cooperative award must be awarded no later than six months after the application selection date; otherwise, negotiations shall proceed no further.

Awards will have project and budget periods that are specific to the project and funding. Budget Period 1 will include the submittal of an acceptable Environmental Information Volume (EIV). Budget Period 1 must be completed no later than twelve months after the application selection date; otherwise the project will be over and shall proceed no further.

G. Reporting Requirements

The reports identified in the model cooperative agreement (See Section VII, Attachment A) are required to be submitted during performance of the award.

H. Property Management and Disposition

Title to all real property, equipment and supplies (excluding Government-furnished property) acquired by or on behalf of the Participant in connection with performance of the Project shall vest upon acquisition in the Participant. The Participant shall make such property available for use in the Project. During the period of the Cooperative Agreement, the Participant may, with the DOE Contracting Officer's prior approval, encumber its title to or dispose of such property. Should said property be sold or Participant receive financial benefit from the property disposition, the Participant shall share the financial benefit with the DOE in the same share ratio as the total project cost sharing.

The cost of disposal of the Demonstration Facility is an allowable cost only if proposed and included in the cost estimate for Stage III-Operations.

The use, management, and disposition of all government-furnished property shall be governed by 10 CFR 600.130 thru 600.137.

I. Cost Sharing

The minimum cost share is 50%. In order to be recognized as allowable cost sharing, a cost must be otherwise allowable in accordance with the applicable Federal cost principles and DOE regulations governing cost sharing. Allowable costs will be shared between DOE and the recipient on an as expended, dollar-for-dollar basis. Although not all-inclusive, provided below is a list of costs that are unallowable as project costs and, therefore, unallowable for cost sharing:

- C Costs incurred in negotiating a Cooperative Agreement with DOE are not allowable as direct charges to the project.

- C DOE shall not accept valuation for property sold, transferred, exchanged, or manipulated in any way to acquire a new basis for depreciation purposes or to establish a fair use value in circumstances that would amount to a transaction for the purpose of the Cooperative Agreement.
- C DOE will not share in both the direct cost and depreciation on the same item. Depreciation is not allowable for cost sharing on any item charged to the project as a direct cost. For example, DOE will cost share the direct cost on equipment or facilities purchased or constructed for the project; but, will not also cost share the depreciation.
- C DOE will not share in the acquisition costs of any fuel other than coal, under this Power Plant Improvement Initiative, unless prior written approval is obtained from the DOE Contracting Officer for use of a limited quantity of another fuel for start-up and shakedown purposes.
- C Interest on borrowings (however represented) and other financial costs such as bond discounts, cost of financing and refinancing capital (net worth plus long-term liabilities), are unallowable project costs. This includes interest on funds borrowed for construction.
- C Facilities capital cost of money shall be an unallowable cost on all real property or equipment acquired by or on behalf of the Participant in connection with the performance of the project.
- C The day-to-day operating costs of the demonstration site will not be recognized as an allowable cost for cost sharing purposes. Only the operating costs directly associated with the proposed work effort (i.e., incremental costs distinct from the daily operational costs) may be recognized as allowable costs for cost-sharing purposes if adequately supported and properly documented.
- C Previously expended research or development costs are unallowable.
- C Forgone fees, forgone profits, or forgone revenues as well as replacement power costs are not allowable costs.
- C Fee or profit paid to any member of the proposing team having a substantial and direct interest in the commercialization of the demonstration technology is unallowable. Competitive subcontracts placed with the prior written consent of the Contracting Officer and subcontracts for routine supplies and services are not covered by this prohibition.
- C The value of patents and data contributed to the project is unallowable.
- C Allowable costs under past, present, or future Federal Government contracts, grants or Cooperative Agreements may not be charged against this Cooperative Agreement. Likewise, the Participant may not charge costs allowable under this project, including any portion of its cost share to the Federal Government under any other contracts, grants, or Cooperative Agreements.
- C Business losses are unallowable.

J. Cost Overruns

The Government is under no obligation to share any cost overruns (i. e., costs incurred during the Demonstration Project that are more than those estimated at the date of award). The Government may, however, at its own discretion, share in the cost of overruns, if funds are available. The Government's share of overruns will not exceed the Government's percentage cost share for the overall project and then only up to 25 percent of the original Government contribution as specified in the initial cooperative agreement.

K. Application Preparation Costs

DOE shall not pay for the preparation or submission of applications.

L. Commitment of Public Funds

The Contracting Officer is the only individual who can legally commit the Government to the expenditure of public funds in connection with the proposed Cooperative Agreement. Any other commitment, either explicit or implied, is invalid.

M. Pre-Application Conference

A pre-application conference is planned for February 15, 2001. Information will be placed on the Internet on the NETL Homepage at: <http://www.netl.doe.gov/business/solicitations>.

N. False Statements

Applications must set forth full, accurate and complete information as required by this solicitation (including attachments). The penalty for making false statements in such documents is prescribed in 18 U.S.C. 1001.

O. DOE Issuing Office

U. S. Department of Energy
National Energy Technology Laboratory
Wallace Road
P. O. Box 10940, MS 921-107
Pittsburgh PA 15236-0940

Point of Contact: Contract Specialist: Jo Ann C. Zysk
Telephone: (412) 386-6600
E-mail address: zyzk@netl.doe.gov

E-mail is strongly encouraged for the submission of questions.

P. Amendment of the Solicitation

The only method by which any term of this solicitation may be amended is by an express, formal amendment to the solicitation generated by the issuing office. No other communication, whether oral or in writing, will amend or supersede the terms of this solicitation.

Q. Catalog of Federal Domestic Assistance Number

CFDA Number 81.089 applies.

R. Time, Date and Place Applications Are Due

Applications submitted through the U.S. Postal Service or hand-delivery (including overnight delivery service companies and couriers) must be received at or sent to:

U.S. POSTAL SERVICE, MAIL TO:

U. S. Department of Energy
National Energy Technology Laboratory
Attn: Jo Ann C. Zysk
Wallace Road
P. O. Box 10940, MS 921-107
Pittsburgh PA 15236-0940

HAND CARRIED, DELIVER TO:

U. S. Department of Energy
National Energy Technology Laboratory
Attn: Jo Ann C. Zysk
Wallace Road, Building 921, Room 116
Pittsburgh PA 15236-0940

ALL APPLICATIONS MUST BE RECEIVED BY 3:00 P.M., Eastern Standard Time (EST), on April 19, 2001.

S. Application Delivery Information

The outside of the package containing the application shall clearly indicate the Solicitation Number against which the application is being submitted. Copy No. 1 of Volumes I and II shall contain the signed original of all documents requiring signature by the applicant. Use of reproductions of signed originals is authorized in all other copies of the application. (See Section IV, Paragraph B.)

T. Telegraphic and E-Mail Applications

Telegraphic applications will **NOT** be considered, although applications may be amended by telegraphic notice provided such notice is received prior to the date and time specified for receipt. The term "Telegraphic" includes both mailgrams and facsimile submissions. Applications submitted by e-mail or other electronic means will **NOT** be considered.

U. Late Applications, Amendments of Applications and Withdrawals of Applications

1. An application or amendment of an application shall be timely if it is received at the location on or before the deadline date and time specified in this section.
2. Applications or amendments of applications may be withdrawn by written notice at any time before award. Written notice includes letters and facsimiles with authorized signatures, but does not include e-mails. Applications will not be returned.

V. Small and Small Disadvantaged Business

DOE strongly encourages small and small disadvantaged business participation in its programs and in this solicitation.

W. Determination of Responsibility

DOE will evaluate the potential Recipient's responsibility before award. Responsibility determinations include the Recipient's capability to manage and account for the funds, property and other assets. If a potential Recipient is determined to not be responsible, the contracting officer may either reject the application or incorporate special restrictive conditions into the terms of the award.

X. Treatment of Proprietary Information

Any applications submitted in response to this solicitation may include technical data and other data, including trade secrets and/or privileged or confidential commercial or financial information, which the applicant does not want disclosed to the public or used by the Government for any purpose other than application evaluation. To protect such data, the applicant shall specifically identify each page including each line or paragraph thereof containing the data to be protected and mark the cover sheet of the application with the following Notice as well as referring to the Notice on each page to which the Notice applies:

NOTICE

The data contained on page(s) _____ of this application have been submitted in confidence and contain trade secrets and/or privileged or confidential commercial or financial information, and such data shall be used or disclosed only for evaluation purposes, provided that if a Cooperative Agreement is made as a result of or in connection with the submission of this application, the Government shall have the right to use or disclose the data herein to the extent provided in the Cooperative Agreement. This restriction does not limit the Government's right to use or disclose data that it obtains without restriction from any source, including the application.

DOE shall not refuse to consider an application solely on the basis that the application is restrictively marked.

Y. Unnecessarily Elaborate Applications

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to this solicitation are not desired and may be construed as an indication of the applicant's lack of cost consciousness. Elaborate art work, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor wanted.

Z. Evaluation Personnel

Applications will be evaluated in accordance with the criteria set forth in Section V of the solicitation. It is expected that all applications submitted under this solicitation will be evaluated by DOE Federal personnel. However, the Government reserves the right to utilize non-Federal evaluators. Applicants who object to the use of non-Federal evaluators must state that objection in their application.

AA. DOE Treatment of Application Information

In the event personnel from other Federal agencies, DOE contractors, or other consultants are utilized to assist DOE in the evaluation of applications, DOE will obtain assurances, in advance, from all evaluators that proprietary information contained in an application will be kept confidential.

BB. Application Clarification

DOE reserves the right to require applications to be clarified or supplemented to the extent considered necessary either through additional written submissions or oral presentations.

CC. Award Without Discussions

Notice is given that award may be made after few or no exchanges, discussions or negotiations. Therefore, all applicants are advised to submit their most favorable application to the Government.

DD. Government Right to Reject or Negotiate

The Government reserves the right, without qualification, to reject any or all applications received in response to this solicitation and to select any application, in whole or in part, as a basis for negotiation and/or award.

EE. Anticipated Selection Date

It is anticipated that selection(s) will be made before August 30, 2001.

FF. Notice of Award

Written notice to unsuccessful applicants and Cooperative Agreement award information will be promptly released in accordance with DOE regulations applicable to financial assistance awards.

GG. Application Acceptance Period

All applications are required to remain valid for a period of 365 days after the deadline for receipt of applications under Subsection R, “Time, Date and Place Applications are Due.”

HH. Disposition of Applications

Applications will not be returned.

II. Presubmission Review and Clearances

Presubmission review under Executive Order 12372, “Intergovernmental Review of Federal Programs” is not required.

JJ. Simpson-Craig Amendment

Organizations that are described in Section 501(c)(4) of the Internal Revenue Code of 1986 and engage in lobbying activities after December 31, 1995, shall not be eligible for the receipt of Federal funds constituting an award, grant, or loan. Section 501(c)(4) of the Internal Revenue Code of 1986 covers:

“Civic leagues or organizations not organized for profit but operated exclusively for the promotion of social welfare, or local associations of employees, the membership of which is limited to the employees of a designated person or persons in a particular municipality, and the net earnings of which are devoted exclusively to charitable, educational or recreational purposes.”

Lobbying activities are defined broadly to include, among other things, contacts on behalf of an organization with specified employees of the Executive Branch and Congress with regard to Federal legislative, regulatory and program administrative matters.

Applicants must submit the Simpson-Craig Amendment Representation found in the assurance submission requirements of this solicitation (See Section IV, C.1, B.3.).

KK. Loans Not Available

Loans are not available under the DOE Minority Economic Impact (MEI) loan program, 10 CFR Part 800, to finance the cost of preparing a financial assistance application.

LL. Unsuccessful Applications

Each unsuccessful applicant will be offered the opportunity for an explanation as to why the application was not selected.

MM. Notice Regarding Eligible/Ineligible Activities

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.

NN. Additional Eligibility Requirements of the Energy Policy Act of 1992

Applications proposing technology development that falls under Titles XX-XXIII of the Energy Policy Act (P.L. 102-486), EAct, are subject to the eligibility requirements stated in Section 2306 of the Act. Such

technologies include but are not limited to fuels cells, advanced turbines and natural gas end-use technologies.

An applicant private sector firm shall be eligible to receive financial assistance under this section only if it is a United States-owned company, or the firm is incorporated in the United States and has a parent company that is incorporated in a country which affords treatment to United States-owned companies that is comparable to treatment the United States affords foreign-owned companies in the following areas: access to government-supported joint ventures in energy research and development, local investment opportunities, and protection of intellectual property.

In addition, the applicant must show that the project, as a whole, is in the economic interest of the United States. To fulfill this requirement, the applicant must consider the contributions of all participants in the project, including any contractors or suppliers that the applicant has named and relied upon in its application. This can be evidenced by: (1) investment in the United States in research, development, and manufacturing, such as the manufacture of major components or subassemblies in the United States; (2) significant contributions to employment in the United States; (3) agreement with respect to any technology arising from assistance provided under this solicitation to promote the manufacture within the United States of products resulting from that technology, taking into account the goals of promoting the competitiveness of United States industry, and to procure parts and materials from competitive suppliers.

For-profit organizations proposing work under Titles XX-XXIII shall complete the EPA Act Section 2306 certification provided in the Financial Assistance Assurance Package (See Section IV, C.1, B.3.) of the solicitation. In the event that information provided in the application is insufficient for DOE to make the required eligibility determination, DOE may request additional information from the applicant.

OO. Performance of Work in the United States

As a condition of award under this solicitation, applicants must agree that at least 75% of the direct labor cost for the project (including subcontractor labor) will be incurred in the United States unless the applicant can demonstrate to the satisfaction of DOE that the United States economic interest will be better served through a greater percentage of the work performed outside the United States. For example, an applicant may provide evidence that expertise to develop a technology exists only outside the United States, but that ultimate commercialization of the technology will result in substantial benefits to the United States such as improved electricity reliability, increased employment, increased exports of U.S.-manufactured products, etc.

PP. National Environmental Policy Act Compliance

The National Environmental Policy Act of 1969 (NEPA) establishes a national policy to ensure that consideration is given to environmental values and factors in Federal planning and decision making. DOE's policy is to comply fully with the letter and spirit of NEPA. To ensure that environmental factors are considered in the decision making process and to promote environmentally responsible decisions, DOE incorporates NEPA requirements early in the planning process for proposed actions. Consistent with Council on Environmental Quality (CEQ) NEPA regulations (40 CFR Parts 1500-1508) and DOE NEPA regulations (10 CFR Part 1021), an overall strategy for compliance with NEPA has been developed. This includes performing project-specific environmental reviews under 10 CFR 1021.216 of environmental issues pertinent to each proposed project before projects are selected, followed by site-specific environmental reviews under NEPA of each project after DOE selection.

No action taken by DOE with regard to any application prior to the completion of the site-specific analysis, including project selection or award, shall be a final decision for purposes of compliance with NEPA.

QQ. Pre-Selection Project-Specific Environmental Questionnaire

For Applications that qualify for comprehensive evaluation, DOE will review under 10 CFR 1021.216, project-specific environmental information supplied by the applicant on the Environmental Questionnaire which is submitted as part of Volume I, Business and Financial application. The environmental information provided by the applicant is independently evaluated by DOE and documented in the form of an environmental critique, which may also include supplemental information developed by DOE. Subsequently, DOE prepares a publicly available environmental synopsis to document the consideration given to environmental factors and to record that the relevant environmental consequences of reasonable alternatives have been evaluated in the selection process.

RR. Post-Selection Environmental Review

Soon after selection, which shall be contingent as specified in 10 CFR 1021.216(i), depending on the information necessary to satisfy NEPA, applicants may be requested to provide additional environmental information which is more detailed than that provided on the Environmental Questionnaire of this solicitation. The guideline for preparing this Environmental Information Volume will be provided at NETL's Web site, www.netl.doe.gov/ppii/index.html. This detailed site-and project-specific information may be used as the basis for site-specific NEPA documents prepared by DOE for each selected project. Such NEPA documents shall be prepared, considered, and published by DOE in full conformance with the requirements of the CEQ regulation and DOE NEPA regulations. DOE must complete its appropriate NEPA process before a go/no go decision and before DOE shares in the cost of detailed design or subsequent project activities (e.g., procurement, construction, operation) under the award.

SS. Post-Award Environmental Monitoring

Each resulting award will specify the monitoring and reporting requirements necessary to ensure compliance with applicable environmental regulations, and permits obtained from Federal, state and local government agencies and DOE NEPA regulations.

TT. Notice of Right to Request Patent Waiver

Applicants have the right to request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of the cooperative agreement that may be awarded as a result of this solicitation, in advance of or within 30 days after the effective date of award. Even where such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the cooperative agreement to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Domestic small businesses and domestic nonprofit organizations normally will receive the patent rights clause at DEAR 952.227-11 which permits the recipient to retain title to such inventions, except under awards for management or operation of a Government-owned research and development facility or under awards involving exceptional circumstances or intelligence activities. Therefore, small businesses and nonprofit organizations normally need not request a waiver. See the patent rights clause in the draft cooperative agreement in this solicitation. See DOE's patent waiver regulations at 10 CFR part 784.

UU. U. S. Competitiveness Provision

DOE anticipates any patent waiver granted under this Program will contain the U. S. Competitiveness Provision contained in the Model Cooperative Agreement.

VV. Recovery of Government's Investment

Replication of the demonstrated technologies is an inherent requirement of the Power Plant Improvement Initiative Program. It is the policy of the Government to require repayment of an amount up to (i. e., not to exceed) its actual contribution to the Project. Repayment will derive from those Projects which are

successful and achieve commercial application. Individual Repayment Agreements for each project will be negotiated. The following points will serve as the basis for these Agreements.

- C The Government's right to recover its contribution shall continue until either the Government has recouped its contribution or 20 years have elapsed from the effective date of the Repayment Agreement.
- C The Repayment Agreement shall remain in effect unless the Secretary of Energy or designee determines that such repayment places the Participant at a competitive disadvantage in domestic or international markets. The Participant's request for this determination will not be considered before the effective date of the Repayment Agreement.
- C Any unpaid amount remaining at the end of the 20 year period will be forgiven by the Government.
- C Repayment shall only apply to that portion of the technology identified as being inside the technology envelope. This envelope should be the same as that used in the negotiated clauses dealing with Rights in Technical Data for large businesses. For small businesses where such technical data provisions are not included, the technical envelope for repayment will be defined during negotiations.
- C Repayment will be generated only from the revenue sources specified in the negotiated Repayment Agreement (i.e., corporate assets are not pledged to the repayment).
- C Repayment shall be based on the following potential sources of revenue arising from the commercialization of the demonstrated technology, including the sale of the demonstration facility itself:
 - 1/2 percent of gross revenues from the sale or lease of equipment that is manufactured and embodies the demonstrated technology, and
 - 5 percent of gross fees resulting from the licensing of the demonstrated technology.
- C Successful applicants may provide an alternative plan during negotiations whereby any revenue source may be used to provide payment that, on an annual basis, is equivalent to or greater than the revenue which would be realized from the two sources listed above.
- C To promote commercialization, negotiators may agree that a grace period from repayment may be appropriate to facilitate introduction of the technology into the marketplace. This grace period may be for a set period, a certain number of facilities, or a certain number of licenses. The terms for any grace period shall be developed during negotiations but will not exceed five years or 10 percent of projected sales during the repayment period, whichever is less. The entire duration of any negotiated grace period will be part of the 20 year repayment period.
- C Repayment is applicable to domestic and international facilities and applications.

WW. Demonstration Facility Site Availability

The applicant must have access to, and use of, the proposed Demonstration Facility Site and any proposed alternative site for the duration of the project.

SECTION IV -- APPLICATION PREPARATION INSTRUCTIONS

A. Application Requirements

The application shall be prepared as set forth herein to provide a standard basis for evaluation and to ensure that each application will be uniform as to format and sequence. These instructions are not to be included in your application.

Applications shall be prepared in accordance with the instructions found in this section. To aid in evaluation, applications shall be clearly and concisely written as well as being neat, indexed (cross-indexed as appropriate) and logically assembled. All pages of each part shall be appropriately numbered and identified with the name of the applicant, the date and the solicitation number to the extent practicable. Each volume is a stand alone document, therefore, some information provided may need to be included in both volumes.

Each application should clearly demonstrate the applicant's capability, knowledge, and experience in regard to the requirements described herein. Failure to respond or follow the instructions regarding the organization and content of the application may result in the application being deemed unacceptable.

Applicants should fully address the requirements of the solicitation and not rely on reviewers' presumed background knowledge. DOE may reject an application that does not include all information and documentation required by statute, 10 CFR Part 600, or by the terms of the solicitation when the nature of the omission precludes review of the application.

During the review of a complete application, DOE may request the submission of additional information if the information is essential to evaluate the application.

B. Overall Arrangement of Application

The application shall consist of two (2) physically separated volumes, individually titled as stated below. Submit the required number of each application volume shown in the matrix below.

<u>VOLUME</u>	<u>ORIGINAL NUMBER OF COPIES</u>	
Volume I -- Business and Financial Application	1	5
Volume II -- Technical Application	1	5

The Originals of all Volumes and the five copies of Volume I should be wrapped as one package; the five copies of Volume II should be wrapped as a separate package. The outside of each package should clearly identify the solicitation number and the volumes in the package.

Please pay close attention to the page limit for Volume II, as specified in subsection C.2.

C.1 Volume I--Business and Financial Application

This volume is used to evaluate the applicant's potential for completing the entire project described in the Statement of Work. It shall, therefore, be specific and complete. In this application section, the applicant must furnish the names, titles, and telephone numbers of persons authorized to represent it in all matters, including negotiations after selection. If the applicant's remittance address is different from the address shown on the Application Volume Cover Sheet, such address including zip code shall be included in this volume.

A. General

1. Volume I, Business and Financial Application, consists of the application coversheet, application forms, assurances package, budget pages, facility site availability documentation, environmental questionnaire, exceptions and deviations to the model instrument, other statements of the offeror, exceptions and deviations, and any other business and financial information.
2. The application identified as the original shall contain all original signatures of all documents requiring signatures. The person signing these documents must have the authority to commit the applicant to all of the provisions of the application. Use of reproductions of signed originals is authorized in all other copies of the application.
3. **Post-Selection Information.** Award of a Cooperative Agreement requires a different level of information from that needed for selection. Soon after notice of selection, applicants should expect that DOE may request the following information:
 - an updated detailed Statement of Work,
 - Environmental Information Volume Outline,
 - an updated Funding Plan,
 - a fully detailed cost estimate,
 - information concerning intellectual property particularly about technical data,
 - more detailed site information, and
 - audit data.

DOE shall use this information as the basis for negotiation of the Cooperative Agreement. Failure to provide this information in a timely manner (i.e., consistent with the schedule for negotiating and making awards) will seriously delay award of a Cooperative Agreement and can result in deselection.

4. All forms needed for preparation of Volume I are found on the NETL Homepage at: <http://www.netl.doe.gov/business/forms/forms.html> in either WordPerfect or PDF format, and are referenced under Section V of the solicitation. Please note that all forms were developed using WordPerfect 6.1 and formatted for printing using an HP LaserJet IIISi printer. Questions on completion of the forms should be addressed to the Contract Specialist.

B. Format and Content

Volume I, Business and Financial Application, shall include the following documents (in the order listed):

1. Volume I - Business and Financial Application Coversheet

An Application Coversheet for Volume I shall contain the following information:

Solicitation Number;
 Due Time and Date of Applications;
 Name and Address of Applicant;
 Point of Contact;
 Telephone/FAX Number;
 Title of Project; and
 Notice of Restriction on Disclosure and Use of Data.

2. Application for Federal Assistance -- Standard Form 424 -- **Form # SF424**
3. Financial Assistance Assurance Package -- **Form #: assure.fa**
 - a. NETL Assurance, Non-Construction Programs -- **NETL F 4220.38**
 - b. Assurances - Non-Construction Programs -- **Standard Form 424B**
 - c. Additional Representations and Certifications for Federal Financial Assistance -- **NETL F 4220.35**
 - d. Disclosure of Lobbying Activities -- **Standard Form - LLL**
 - e. Assurance of Compliance -- Nondiscrimination in Federally Assisted Programs -- **DOE F 1600.5**
4. Funding and Financial Information

The Applicant shall provide a minimum 50% cost share. At the time of application submission, the applicant must have the financial commitments in place or a plan to obtain the funding for the entire non-DOE share of the total project cost.

- a) **Funding Plan.** Applicant must submit a funding plan that identifies all sources of project funds. The funding plan must demonstrate that the commitment of these funds will be made no later than six months after selection. The funding plan shall include a business plan typical of what would be required by a major financial institution to finance this demonstration project. The funding plan must demonstrate that these funds are sufficient to cover all non-Federal funding required for the duration of the project, including plans for funding any potential project cost increases. For funding which is to come from the Participant, a discussion of the degree of certainty that the funds required will be available must be provided. This discussion shall include a full description of any liabilities, limitations, conditions or other factors which could affect the availability of applicant's funding.

If external (i.e., not from the applicant or its parent organization) financing will be a source of project funds, the applicant shall discuss the terms and conditions of such financing. A representative with the authority to commit funds for each entity identified as a source of funding shall provide a signed statement, certification of private financing, letter of intent, or similar documentation of the amount and type of funding to be provided.

This section must also include a schedule which shows that the total amount and timing for all funding to be provided by non-Federal sources is in agreement with the project's total estimated costs and schedule for expenditures.

If in-kind contributions are to be provided to the project, then the applicant must explain and defend their valuation.

- b) **Financial Statements.** The applicant must provide current financial statements for all business quarters reported on in the current fiscal year, along with audited financial statements for the most recent three fiscal years. Any non-Federal source of financing (e.g., team member, subcontractor or third party) that will commit to funding some portion of the applicant's share of the project costs must also provide audited financial statements as indicated above.
- c) **Financial Commitment.** The applicant must discuss the priority placed by the team's management on financing the project, and should include a discussion of management's

decision to allocate internal resources, if applicable. DOE views that a project is likely to be successful if there is a strong project team commitment. The degree of commitment to the project will be measured primarily by the level of financial risk assumed by project team members, which is demonstrated by their commitment to: (1) share in project costs above the Government's minimum requirements, and (2) to cover potential project cost increases.

- d) Financial Management Systems. In order to qualify for a financial assistance award, the Applicant must demonstrate a financial management system that satisfies 10 CFR 600.121, Standards for Financial Management Systems, by describing how its system meets the seven criteria outlined in 10 CFR 600.121(b).

5. Budget Page

The applicant must provide a detailed budget information on one or more of the forms listed below. Supporting cost data shall be submitted as indicated by the instructions of the budget form and/or the supporting cost detail requirement below. The applicant shall provide a detailed budget, for the entire period of support with all cost sharing included in the total project costs, with written justification sufficient to allow evaluation of the itemized list of all costs provided.

Educational Institution Applicants: Budget Page -- DOE F 4620.1

Other Applicants: Federal Assistance Budget Information -- DOE F 4600.4

Failure to provide the detailed cost information as described in the instructions (Supporting Cost Detail Requirements) provided below will result in an incomplete package. There is a minimum cost share required by this solicitation. The applicant shall stipulate in the application the source and amount of cost sharing and the value of third party in-kind contributions proposed to meet the requirement.

SUPPORTING COST DETAIL REQUIREMENTS

The following cost detail is required for the proposed cost elements. Additionally, teaming members and subcontractors are also required to submit the following information with their budgets.

Personnel -- In support of the proposed personnel costs, provide a supplemental schedule that identifies the labor hours, labor rates, and cost by labor classification for each budget year. Also indicate the basis of the labor classification, number of hours, and labor rates. An example of the basis for the labor classification and number of hours could be past experience, engineering estimate, etc. An example of the basis for the labor rates could be actual rates for the individuals who will perform the work or an average labor rate for the labor classification or a departmental average rate.

Fringe Rate -- Provide the method used to calculate the proposed rate amount. If a fringe benefit rate has been negotiated with, or approved by, a Federal Government agency, provide a copy of the agreement. If no rate agreement exists, provide a detailed list of the fringe benefit expenses (e.g., payroll taxes, insurances, holiday and vacation pay, bonuses) and their associated costs. Identify the base for allocating these fringe benefit expenses.

Travel -- For each proposed trip, provide the purpose, number of travelers, travel origin and destination, number of days, and a breakdown of costs for airfare, lodging, meals, car rental, and

incidentals. The basis for the airfare, lodging, meals, car rental, and incidentals must be provided, such as past trips, current quotations, Federal Travel Regulations, etc.

Equipment -- Provide an itemized list of each piece of equipment, its unit cost, and the basis for estimating the cost, for example, vendor quotes, catalog prices, prior invoices, etc.

Supplies -- Provide an itemized list of supplies that have an acquisition cost greater than \$5,000, identify the quantity of each item, its unit cost, and the basis for estimating the cost, for example, vendor quotes, catalog prices, prior invoices, etc.

Subcontractors -- Identify each planned subcontractor and its total proposed costs. Each subcontractor's cost application and supporting cost detail should be included as part of the Applicant's cost application. In addition, the Applicant shall provide the following information for each planned subcontract: a brief description of the work to be subcontracted; the number of quotes solicited and received; the cost or price analysis performed by the offeror; names and addresses of the subcontractors tentatively selected and the basis for their selection; i.e. low bidder, delivery schedule, technical competence; type of contract and estimated cost and fee or profit; and, affiliation with the offeror, if any.

Consultants -- Provide the hourly or daily rate along with the basis for the rate. Furnish resumes or similar information regarding qualifications or experience. Provide at least two invoices reflecting hourly or daily rates charged to customers other than the Government. A statement signed by the consultant certifying his or her availability and salary must be provided. If travel or incidental expenses are to be charged, give the basis for these costs.

Other Direct Costs -- Provide an itemized list with costs for any other item proposed as a direct cost and state the basis for each proposed item.

Indirect Costs -- If indirect rates have been negotiated with or approved by a Federal Government agency, please provide a copy of the latest rate agreement. If you do not have a current rate agreement, submit an indirect cost rate application which includes the major base and pool expense groupings by line item and dollar amount. In either case, provide a breakdown of the proposed indirect costs for each of your accounting periods included in the application. Identify the rate and allocation base for each indirect cost, such as Overhead, General and Administrative, Facilities Capital Cost of Money, etc.

Cost Sharing -- Identify the percentage level and source of cost sharing for the proposed project. Firm funding commitments are expected and documentation of those commitments must be included in the application. Additionally, the impact of DOE's cost share to the viability of the project must be addressed, to include justification for the need for Federal Funds.

NOTE: The total project cost (i.e. sum of Applicant and other participants plus DOE cost shares) must be reflected in each budget form.

A detailed estimate of the cash value (basis of and the nature, e.g., equipment, labor, facilities, cash, etc.) of all contributions to the project by each participant must be provided. Note that "cost-sharing" is not limited to cash investment. In-kind contributions (e.g., contribution of services or property; donated equipment, buildings, or land; donated supplies; or unrecovered indirect costs) incurred as part of the project may be considered as all or part of the cost share. The "cost-sharing" definition is contained in 10 CFR 600.30, 600.101, 600.123, 600.224, and OMB Circular A-110.

Fee or profit will not be paid to the recipients of financial assistance awards. Additionally, foregone fee or profit by the Applicant shall not be considered cost sharing under any resulting award. Reimbursement of actual costs will only include those costs that are allowable and

allocable to the project as determined in accordance with the applicable cost principles prescribed in 10 CFR 600.127.

Royalty Information

- (a) Cost or charges for royalties. When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:
 - (1) Name and address of licensor.
 - (2) Date of license agreement.
 - (3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
 - (4) Brief description, including any part or model numbers of each cooperative agreement item or component on which the royalty is payable.
 - (5) Percentage or dollar rate of royalty per unit.
 - (6) Unit price of cooperative agreement item.
 - (7) Number of units.
 - (8) Total dollar amount of royalties.
 - (b) Copies of current licenses. In addition, if specifically requested by the Contracting Officer before execution of the cooperative agreement, the applicant shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.
- 6. Site Availability - The applicant must document its rights to access and use the site of the Demonstration Facility for the period of time appropriate to the demonstration project proposed. This documentation should include evidence of the applicant's ownership of the site, option to purchase the site, lease for the site, or letter signed by the owner of the site which provides firm evidence of the commitment of the owner to assure availability of the site. A letter from the site owner, if provided, must be signed by a corporate official or other appropriate person with authority to make binding commitments about use of the site. If alternate sites are being proposed, evidence of commitment of each site must be documented and submitted in the application.
 - 7. Environmental Questionnaire -- Filename: nepasol found on the NETL Homepage at: <http://www.netl.doe.gov/business/forms/forms.html>
 - 8. Acknowledgment of Amendments - The applicant shall specifically indicate their acknowledgment and receipt of the amendment(s) posted on the NETL Web site at <http://www.netl.doe.gov/business/solicit/> by signing the amendment and including it in Volume I or stating the receipt of the amendment in the text of Volume I.
 - 9. Summary of Exceptions and Deviations Taken in Other Volumes
- The applicant shall summarize each technical, cost, business, or other exception(s) taken elsewhere, and provide specific cross references to its full discussion.

C.2 Volume II--Technical Application**A. General**

The applicant shall include a technical discussion in the format specified below. This format relates to the technical evaluation criteria, Section V - D. Applicants are asked to follow the outline shown below. Alternate heading names and additional headings may be included as desired. The “Technical Application” shall not exceed **75 pages (single spaced) in length**.

B. Format and Content.

In order to produce a comprehensive application for this solicitation, the applicant is required to address, at a minimum, the areas listed below. To help facilitate the review process and to ensure addressing all the review criteria, the applicant shall use the following Table of Contents when preparing the technical application.

TABLE OF CONTENTS

	<u>Page</u>
PUBLIC ABSTRACT	i
Table of Contents	ii
List of Tables	iii
List of Figures	iv
List of Acronyms	v
 1. TECHNICAL MERIT OF THE PROPOSED TECHNOLOGY	 #
2. COMMERCIAL VIABILITY AND MARKET POTENTIAL OF THE PROPOSED TECHNOLOGY	#
3. MANAGEMENT APPROACH & CAPABILITIES OF THE PROJECT TEAM	#
A. PROJECT PLAN	#
B. FACILITIES AND EQUIPMENT	#
4. TECHNICAL EXCEPTIONS AND DEVIATIONS	#
 APPENDICES	
A. RESUMES	A1
B. LETTERS OF COMMITMENT	B1
C. ADDITIONAL PERTINENT PUBLICATIONS (if any)	C1

The technical application will consist of the applicant's outline addressing the technical and management aspects of the assistance action, the applicant's capabilities and what the applicant will do to satisfy the requirements of the solicitation. Since the technical information contained in this section will be evaluated to determine such matters as understanding of the work to be performed, technical approach, and potential for completing the desired work, it should be specific and complete in every detail. The application should be practical and be prepared simply and economically, providing a straight forward, concise delineation of what it is the applicant will do to satisfy the requirements of the solicitation.

In order that the Technical Application may be evaluated strictly on the merit of the material submitted, no cost information is to be included in the Technical Application.

The application shall not merely offer to perform work in accordance with the solicitation objectives but shall describe the work proposed.

The Technical Application shall not exceed seventy-five (75) pages. The application shall contain only single-sided pages. The appendices are to be attachments to the Technical Application and will not be included in the page limitation. Pages in excess of the page limitation will be removed from the

application, and will not be evaluated. All text shall be typed, single spaced, using 12 point font, and printed, unreduced on size 8 1/2-inch by 11-inch paper. Illustrations shall be legible, all text in 12 point font, and all foldouts no longer than 11-inches by 17-inches, as appropriate for the subject matter. Each 11-inch by 17-inch foldout is considered two pages when determining the number of pages. Pages of each volume shall be sequentially numbered with the volume and page numbers on each page. Except as otherwise noted in the solicitation, the page guidelines previously set forth constitute a limitation on the total amount of material that may be submitted for evaluation. No material may be incorporated in any application by reference as a means to circumvent the page limitation.

The applicant shall provide the technical information as follows:

Public Abstract: This section shall contain a concise public abstract of not more than one (1) typewritten page clearly stating the objectives of the proposed research, the title of the project, methodology, and sponsoring organization(s). The abstract is to provide an overview of the proposed project objectives. It is a stand-alone document. This abstract may be released to the public by DOE in whole or in part at any time. It is, therefore, required that it shall not contain proprietary data or confidential business information. The offeror shall indicate a point of contact for coordination, preparation and distribution of press releases.

Technical Merit: The proposing team shall provide a description of the proposed project by including, but not limited to, discussions that address the following topics:

- a) Discuss the adequacy, appropriateness, and relevance of the proposed demonstration to the objectives of the solicitation, including the ability of the proposed demonstration project to alleviate potential power shortages and improve local and/or regional electricity reliability.
- b) The process concept and how it operates (including preliminary process flow diagram(s) with major equipment items and energy and material balances around each major process unit and the overall plant, indicating temperature, pressure, and composition of major streams). Discussions on the important process chemistry and engineering concepts must be included.
- c) Discuss and provide evidence of the readiness of the technology for demonstration at the size proposed.
- d) If the proposed technology involves hardware, describe the attributes of the device or module being proposed, such as environmental performance, efficiency of operation, or expectations of low-cost producibility. Explain the principles and provide engineering analysis and process data to support the proposed project.
- e) Compare the performance of the proposed technology or methodology to current commercial practice for achieving comparable ends and, if appropriate, to other well known technical approaches that are in development.
- f) Identify all major exit streams to the environment that would be impacted by this technology. (After award, develop a preliminary plan to sample those streams.)

Commercial Viability and Market Potential: The proposing team shall demonstrate the commercial viability and market potential of the proposed project through discussions that address the following:

- a) Provide quantitative analysis to support the degree to which commercial replications are likely to alleviate potential power shortages and improve electricity reliability on a national scale.
- b) Substantiate the commercialization potential of the proposed power plant technology, subsystem(s), component(s), or module(s) with clear, concise, and complete research and

technology development results, analysis and evaluation. This evaluation must contain an economic assessment of the technology and delineation of the present barriers to market entry that will be overcome by the proposed demonstration; cost, performance, process, innovation and learning targets that must be overcome by the proposed demonstration to achieve market acceptance. Evidence of direct customer feedback and interactions with respect to the development of the cost, performance, innovation and learning targets presented in the application must be shown.

- c) Provide quantitative analysis of the applicability or retrofitability of the proposed technology, subsystem, component, or module in the existing or new coal-fired power generation market. This is to include discussion, evaluation and analysis of the types, numbers, and percentages of plants, geographical locations, types of fuel, and potential for enhancing electricity reliability of coal-fired power plants.
- d) Show how the scale of the proposed technology, subsystem, component, or module is of the appropriate size for commercial acceptance. Demonstrating how the proposed project models, compares to, or builds upon past commercialization successes would be beneficial.
- e) Provide marketing estimates of the potential for application in domestic and international markets. The proposing team should address, analyze, and evaluate the specific international markets in which the proposed project applies and make estimates as to the sales that could be achieved.
- f) Identify potential spin-off products, sub-systems, components, and modules that may result from the completion of the proposed effort.

Management Approach & Capabilities: The proposing team shall describe its capabilities by including discussions that:

- a) Describe the credentials, capabilities, and experience of key personnel by including, in an appendix, resumes and other information consistent with and appropriate to the role each will play in the proposed project.
- b) Document relevant prior or current corporate experience of participating organizations.
- c) Show responsibilities and lines of authority among the various project participants, including the applicant, and subcontractors if applicable, and the roles of key personnel and percentages of their time devoted to the proposed project.
- d) Include a brief description of proposed reporting, public outreach, and project information dissemination activities.

Project Plan: Provide a Statement of Work, Work Breakdown Structure, Test Plan if appropriate, and milestone schedule showing major decision points. The project should be structured according to three stages: Stage 1 - Design; Stage 2 - Construction; and Stage 3 - Operations.

Facilities and Equipment: The applicant shall describe the type, quality, availability, and appropriateness of the proposed facilities and equipment. If extensive equipment is to be utilized, an itemized listing may be included in an appendix to supplement the discussion presented in the body of the application.

Technical Exceptions and Deviations

This section shall identify and explain any exceptions or deviations taken or conditional assumptions made with respect to the technical requirements of the solicitation.

Any exceptions taken must contain sufficient amplification and justification to permit evaluation. All benefits to the Government shall be explained for each exception taken. Such exceptions will not, of themselves, automatically cause an application to be termed unacceptable. However, a large number of exceptions, or one or more significant exceptions not providing benefit to the Government may result in rejection of the application(s) as unacceptable.

SECTION V -- EVALUATION AND SELECTION

A. Introduction

This section contains the evaluation approach as well as the individual criteria to be used in the evaluation of applications.

B. General

It is the policy of DOE that any financial assistance be awarded through a merit-based selection process that provides for a thorough, consistent and independent examination of applications, based on pre-established criteria.

C. Preliminary Evaluation

The Application must meet the following mandatory requirements:

- C The proposed project must be conducted at a facility located in the United States.
- C The proposed project must utilize at least 75% coal, as measured on a fuel input (Btu) basis.
- C The proposed project must be designed for and operated with coal. These coals must be from mines located in the United States.
- C The applicant must agree to provide a cost share of at least 50 percent of the total project cost for the total project, for each project stage, and for each budget period.
- C The applicant must have access and use rights for the proposed site of the demonstration project for the duration of the project.
- C The proposed project team must be clearly identified and firmly committed to fulfilling its proposed role in the project.
- C The applicant must agree that, if selected, it will submit a "Repayment Agreement" consistent with Section II, Recovery of Government's Interest and Attachment C, Model Repayment Agreement.
- C The application must be signed by a responsible official of the proposing organization authorized to contractually bind the organization to the performance of the Cooperative Agreement in its entirety.
- C The application must be consistent with the objectives of this solicitation as stated in Section I-C.
- C The application must contain sufficient technical, management, financial, cost, and commercialization information to enable its comprehensive evaluation as described below.

Failure to meet one or more of these mandatory requirements will result in rejection of the application at the preliminary evaluation stage. In the event that an application is so rejected, a notice will be sent to the applicant stating the reason(s) that the application will not be considered for an award under this solicitation.

Applications passing the preliminary evaluation shall be subject to a comprehensive evaluation in accordance with the evaluation criteria listed in this section.

D. Technical Evaluation Criteria

The technical evaluation is conducted to determine the merits of the technical application with regard to both the potential success of the project and its potential for future commercial applications. The evaluation results in a numerical score for each application against each of the technical evaluation criteria.

Technical applications submitted in response to this solicitation will be evaluated and scored in accordance with the Technical Evaluation Criteria listed below:

Criterion 1: Technical Merit of the Proposed Technology (40%)

Potential of the proposed technology to advance the efficiency, environmental performance, and/or cost competitiveness of coal-fired capacity in new or existing facilities well beyond that which is in operation now, has been demonstrated to date, or is required. Ability of the proposed demonstration to alleviate potential power shortages and otherwise improve electricity reliability locally and/or regionally.

Factors to be considered are:

- Adequacy, appropriateness and relevance of the demonstration to the objectives of the solicitation.
- Technical readiness for demonstration of the technology at the size scale proposed.
- Reasonableness and adequacy of the technical approach proposed for the demonstration.

Criterion 2: Commercial Viability and Market Potential of the Proposed Technology (30%)

Potential of the proposed technology to be commercialized, i.e., made available to the market, over the next few years. Appropriateness of the project scale to prove commercial viability and, if intended for existing facilities, applicability to a large portion of existing capacity. Degree to which commercial replications are likely to alleviate potential power shortages and otherwise improve electricity reliability on a national scale.

Factors to be considered are:

- Extent to which proposed technology enables the continued and increased use of coal for power generation.
- The efficiency and/or effectiveness with which the proposed technology, applied alone or as part of a larger process, converts coal to electricity or to electricity and other useful products.
- The potential of the proposed technology to achieve widespread deployment following its demonstration.
- Extent of project team commitment to the demonstration project and subsequent technology commercialization.

Criterion 3: Management Approach & Capabilities of the Project Team (30%)

Measures the quality, ability and potential of the project team to help realize the overall objectives of the Power Plant Improvement Initiative.

Factors to be considered are:

- Appropriateness, rationale, and completeness of the proposed Statement of Work to meet the identified needs.
- Appropriateness of the scope and duration of the demonstration program.
- Adequacy of project schedule and milestones, Work Breakdown Structure, and reporting activities.
- Capabilities, experience, and degree of involvement in the project of key personnel.
- Corporate experience of team members in similar technology development, demonstration, and commercialization activities.
- Clarity and logic of project organization with respect to responsibilities and authorities of project participants, including major subcontractors, and teaming arrangements.
- Adequacy of the facilities and equipment.

E. Funding and Financial Information Evaluation Criteria

The funding and financial evaluation, which will be adjectively rated, is conducted to determine the:

- a) adequacy and completeness of the proposed plan to fund the project;

- b) financial condition and capability of proposed funding sources to provide the non-Federal share of project costs;
- c) priority placed by management on financing the project; and
- d) adequacy of the Applicant's financial management system.

F. Budget Information Evaluation Criteria

The budget evaluation, which is not point scored, is conducted to determine the:

- a) reasonableness, allowability, and allocability of the proposed cost and the proposed cost share;
- b) completeness and adequacy of the supporting documentation for the cost estimate; and,
- c) applicant's understanding of the Project Objectives by ensuring all work elements included in the SOW have associated costs, and that all cost elements in the proposed budget have corresponding work elements included in the SOW.

G. Environmental, Health & Safety Evaluation Criteria

The Environmental Assessment Questionnaire will be evaluated in order to (1) determine adequacy and completeness of furnished data, and (2) assess the applicant's awareness of project-related requirements, including mitigating any project-related risks and impacts. The Questionnaire will not be point scored.

H. Program Policy Factors

These factors, while not indicators of the Applicant's merit, e.g., technical excellence, cost, proposer's ability, etc., may be essential to the process of selecting the application(s) that, individually or collectively, will best achieve the program objectives. Such factors are often beyond the control of the Applicant. Applicants should recognize that some very good applications may not receive an award because they do not fit within a mix of projects which maximizes the probability of achieving the DOE's overall research and development objectives. Therefore, the following Program Policy Factors may be used by the Source Selection Authority (SSA) to assist in determining which of the ranked application(s) shall receive DOE funding support.

Programmatic Balance: It may be desirable to select one or more projects that represent a diversity of technology approaches and methods. Further, DOE reserves the right to select projects that collectively utilize a broad range of U.S. coals.

I. Importance of Evaluation Criteria

The evaluation of the technical application will be conducted using preestablished weights to determine the relative merits of the application in accordance with the technical evaluation criteria. The Technical Application is of greater importance than the Business and Financial Application. However, a poor quality Business and Financial Application may result in the project not being selected for award.

J. Basis For Selection and Award

The DOE anticipates the award of one or more financial assistance instruments to those applicants whose applications are determined to be in the best interest of the Department in achieving the program objectives set forth in this solicitation. Selection of an application by the Department will be achieved through a process of evaluating the merits of the applicant's complete application, in accordance with all of the evaluation factors set forth in this section.

This process reflects the Department's desire to accept an application based on its potential in best achieving program objectives, rather than solely on evaluated technical merit or cost. Accordingly, the DOE may select for an award all, none, or any number or part, of an application, based on its decision as to which meritorious applications best achieve the program objectives set forth in this solicitation.

It is important for applicants to note that selection for negotiations will be made entirely on the basis of applications submitted. Applications should, therefore, address specifically the factors mentioned in the evaluation criteria, and not depend upon reviewers' background knowledge.

SECTION VI -- ELECTRONIC FORMS AND/OR DOCUMENTS

- A. All forms needed for preparation of Volume I are found on the NETL Homepage at:
<http://www.netl.doe.gov/business/forms/forms.html> in either WordPerfect or Portable Document Format (PDF). Furthermore, a listing of the Volume I forms is presented in the table below. Please note that all forms were developed using WordPerfect 6.1 and formatted for printing using an HP LaserJet III Si printer.
- B. To view and print PDF files from the NETL Homepage, one needs to first download and install the free Adobe Acrobat Reader from Adobe Systems, Inc. See our getting started instructions for help. The WordPerfect 6.1 files have been put into self-extracting ZIP files. See our instructions on Unzipping a "Self-Extracting" file for further assistance. For assistance with any of the electronic forms or documents, please send an e-mail to the attention of the Contract Specialist, Ms. Jo Ann C. Zysk at "zysk@netl.doe.gov," or by telephone at (412) 386-6600 (Also reference trouble shooting page).

Note: Forms downloaded in WordPerfect are fillable; however, care should be taken to maintain the original format.

Form #	Title	WP6.1 File	PDF File
assure.fa	Financial Assistance Assurance Package	assurefa.exe	assurefa.pdf
D1600.5	*Assurance of Compliance	1600-5.exe	1600-5.pdf
D4600.4	Federal Assistance Budget Information	4600-4.exe	4600-4.pdf
D4620.1	Budget Page	4620-1.exe	4620-1.pdf
F4220.35	*Additional Representations & Certifications for Federal Financial Assistance	4220_35.exe	4220_35.pdf
F4220.38	*NETL Assurance, Non-Construction Programs	4220_38.exe	4220_38.pdf
nepasol	Environmental Questionnaire for Solicitations	nepasol.exe	nepasol.pdf
SF424	Application for Federal Assistance	424.exe	424.pdf
SF424b	Assurances - Non-Construction Programs	424b.exe	424b.pdf
SFLLL	*Disclosure of Lobbying Activities	lll.exe	lll.pdf
*Form also contained within form file: <u>assure.fa</u> . Provided separately for convenience.			

SECTION VII - ATTACHMENTS

ATTACHMENT A

MODEL COOPERATIVE AGREEMENT

(End of text for this page)

NOTICE OF FINANCIAL ASSISTANCE AWARD*(See Instructions on Reverse)*

Under the authority of Public Law

and subject to legislation, regulations and policies applicable to (cite legislative program title):

1. PROJECT TITLE				2. INSTRUMENT TYPE 9 GRANT 9 COOPERATIVE AGREEMENT																															
3. RECIPIENT (Name, address, zip code, area code and telephone no.)				4. INSTRUMENT NO.		5. AMENDMENT NO.																													
				6. BUDGET PERIOD FROM: THRU:		7. PROJECT PERIOD FROM: THRU:																													
8. RECIPIENT PROJECT DIRECTOR (Name and telephone no.)				10. TYPE OF AWARD 9 NEW 9 CONTINUATION 9 RENEWAL 9 REVISION 9 SUPPLEMENT																															
9. RECIPIENT BUSINESS OFFICER (Name and telephone no.)																																			
11. DOE PROJECT OFFICER (Name, address, zip code, telephone no.)				12. ADMINISTERED FOR DOE BY (Name, address, zip code, telephone no.)																															
13. RECIPIENT TYPE <div style="display: flex; justify-content: space-between;"> <div>9 STATE GOV'T</div> <div>9 INDIAN TRIBAL GOV'T</div> <div>9 HOSPITAL</div> <div>9 FOR PROFIT ORGANIZATION</div> <div>9 INDIVIDUAL</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>9 LOCAL GOV'T</div> <div>9 INSTITUTION OF HIGHER EDUCATION</div> <div>9 OTHER NONPROFIT ORGANIZATION</div> <div>9 C 9 P 9 SP</div> <div>9 OTHER (Specify) _____</div> </div>																																			
14. ACCOUNTING AND APPROPRIATIONS DATA:						15. EMPLOYER I.D. NUMBER																													
a. Appropriation Symbol		b. B&R Number		c. FT/AFP/OC				d. CFA Number																											
16. BUDGET AND FUNDING INFORMATION <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">a. CURRENT BUDGET PERIOD INFORMATION</th> <th colspan="2" style="text-align: left;">b. CUMULATIVE DOE OBLIGATIONS</th> </tr> </thead> <tbody> <tr> <td style="width: 35%;">(1) DOE Funds Obligated This Action</td> <td style="width: 15%; text-align: right;">\$</td> <td style="width: 35%;">(1) This Budget Period</td> <td style="width: 15%; text-align: right;">\$</td> </tr> <tr> <td>(2) DOE Funds Authorized for Carry Over</td> <td style="text-align: right;">\$</td> <td><i>[Total of lines a.(1) and a.(3)]</i></td> <td></td> </tr> <tr> <td>(3) DOE Funds Previously Obligated in this Budget Period</td> <td style="text-align: right;">\$</td> <td>(2) Prior Budget Periods</td> <td style="text-align: right;">\$</td> </tr> <tr> <td>(4) DOE Share of Total Approved Budget</td> <td style="text-align: right;">\$</td> <td>(3) Project Period to Date</td> <td style="text-align: right;">\$</td> </tr> <tr> <td>(5) Recipient Share of Total Approval Budget</td> <td style="text-align: right;">\$</td> <td><i>[Total of lines b.(1) and b.(2)]</i></td> <td></td> </tr> <tr> <td>(6) Total Approved Budget</td> <td style="text-align: right;">\$</td> <td></td> <td></td> </tr> </tbody> </table>								a. CURRENT BUDGET PERIOD INFORMATION		b. CUMULATIVE DOE OBLIGATIONS		(1) DOE Funds Obligated This Action	\$	(1) This Budget Period	\$	(2) DOE Funds Authorized for Carry Over	\$	<i>[Total of lines a.(1) and a.(3)]</i>		(3) DOE Funds Previously Obligated in this Budget Period	\$	(2) Prior Budget Periods	\$	(4) DOE Share of Total Approved Budget	\$	(3) Project Period to Date	\$	(5) Recipient Share of Total Approval Budget	\$	<i>[Total of lines b.(1) and b.(2)]</i>		(6) Total Approved Budget	\$		
a. CURRENT BUDGET PERIOD INFORMATION		b. CUMULATIVE DOE OBLIGATIONS																																	
(1) DOE Funds Obligated This Action	\$	(1) This Budget Period	\$																																
(2) DOE Funds Authorized for Carry Over	\$	<i>[Total of lines a.(1) and a.(3)]</i>																																	
(3) DOE Funds Previously Obligated in this Budget Period	\$	(2) Prior Budget Periods	\$																																
(4) DOE Share of Total Approved Budget	\$	(3) Project Period to Date	\$																																
(5) Recipient Share of Total Approval Budget	\$	<i>[Total of lines b.(1) and b.(2)]</i>																																	
(6) Total Approved Budget	\$																																		
17. TOTAL ESTIMATED COST OF PROJECT \$ _____ <i>(This is the current estimated cost of the project. It is not a promise to award nor an authorization to expend funds in this amount.)</i>																																			
18. AWARD AGREEMENT TERMS AND CONDITIONS This award/agreement consists of this form plus the following: a. Special terms and conditions. b. Applicable program regulations (<i>specify</i>) _____ (Date) _____ c. DOE Assistance Regulations, 10 CFR Part-600, as amended. d. Application/proposal dated _____, 9 as submitted 9 with changes as negotiated.																																			
19. REMARKS																																			
20. EVIDENCE OF RECIPIENT ACCEPTANCE <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;">(Signature of Authorized Recipient Official)</div> <div style="width: 45%;">(Date)</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;">_____ (Name)</div> <div style="width: 45%;"></div> </div>				21. AWARDED BY <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;">(Signature)</div> <div style="width: 45%;">(Date)</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;">_____ (Name)</div> <div style="width: 45%;"></div> </div> <div style="text-align: center; margin-top: 10px;">Contracting Officer</div>																															

INSTRUCTIONS

(This form shall be completed in accordance with the following instructions. For any clarification or additional information that might be needed, consult the appropriate section of the DOE Financial Assistance Procedures Manual (DOE-FAPM).)

Insert in the space provided, in the line which begins, "Under the Authority of Public Law ...," the number and the name of the Public Law which authorizes this award. On the line below, enter the title of the pertinent program.

Block 1 — Enter the project title as it appears in the SF-424 or equivalent application/proposal face sheet.

Block 2 — Place a checkmark in the box beside the appropriate financial assistance instrument.

Block 3 — Enter the name, address, and telephone number of the applicant/proposer as it appears in the SF-424 or equivalent application/proposal face sheet.

Block 4 — Enter the instrument number. (See DOE-FAPM.)

Block 5 — Enter the appropriate amendment number. (See DOE-FAPM for guidance.)

Block 6 — Enter the starting date and expiration date for the current budget period. If a budget period is being changed, enter the starting date and expiration date for the budget period, as changed.

Block 7 — Enter the starting date and anticipated completion date for the project. If a project period is being changed, enter the starting date and anticipated completion date for the project period, as changed.

Block 8 — Enter the name and telephone number of the individual designated by the applicant/proposer as the director of the project.

Block 9 — Enter the name and telephone number of the individual designated by the applicant/proposer as the contact for all business matters.

Block 10 — Place a checkmark in the box opposite the term which identifies the type of action being taken. (The terms are defined in the DOE-FAPM.)

Block 11 — Enter the name, address, and telephone of the individual designed by the DOE program office as the project officer.

Block 12 — Enter the name, address, and telephone number of the individual/organization who will administer the agreement for DOE.

Block 13 — Place a checkmark in the box beside the applicable recipient type. If the recipient is a for-profit organization, also check one of the lower boxes as follows: "C" for Corporation, "P" for Partnership, and "SP" for Sole Partnership. If the recipient is of a type not indicated, place a checkmark in the box beside "Other," and identify the recipient type in the space provided.

Block 14 — Enter where indicated, the appropriation symbol, B&R number, Fund Type (FT)/AFP Code (AFP)/Objective Class (OC) and CFA Number from the Procurement/Financial Assistance Request Authorization (DOE Form PR-799A). Completion Block 14.d. is required only for awards made by Headquarters.

Block 15 — Enter the applicant's/proposer's Federal Employer Identification No. from the SF-424 or equivalent application/proposal face sheet, or if the applicant/proposer is an individual, enter his/her social security number.

Block 16 — Entries should be made as follows. (If no dollar entry is appropriate, a zero should be entered to indicate there was no error of omission.)

Line a.(1) — Enter the amount of DOE funds obligated by this action.

Line a.(2) — Enter the amount of DOE funds not expended in prior budget period(s), if any, authorized by DOE for expenditure in the current budget period.

Line a.(3) — Enter the amount of DOE funds previously obligated in the current budget period.

Line a.(4) — Enter DOE's share of the total approved budget shown in Line a.(6).

Line a.(5) — Enter the recipient's share of the total approved budget shown on Line a.(6).

Line a.(6) — Enter the total approved budget for the current budget period. (Add the amounts in Lines a.(4) and a.(5).)

Line b.(1) — Enter the amount of DOE funds obligated in the current budget period. (Add the amounts in Lines a.(1) and a.(3).)

Line b.(2) — Enter the amount obligated by DOE in prior budget periods.

Line b.(3) — Enter the amount obligated by DOE in the project period to date. (Add the amounts in Lines b.(1) and b.(2).)

Block 17 — Must be completed for cooperative agreements. Contracting Officers may exercise discretion as to whether to complete it for grants. Enter the blank provided, the amount which represents the current estimate of total funds and dollar value of in-kind contributions (both DOE and recipient shares) needed to carry out the entire project. Include all funds and contributions previously provided, those being provided by this action, and all anticipated future obligations and contributions of both parties.

Block 18 — Complete as follows.

Item a. — No entry necessary.

Item b. — Enter the legal citation from the Code of Federal Regulations or Federal Register and the effective date for the program regulations applicable to the program under which the award is made.

Item c. — Mark the box beside B for grants or C for cooperative agreements.

Item d. — In the blank provided, enter the date of the application/proposal. (If SF-424 is used, see block 23c on page 1.) Place a checkmark in the appropriate box to indicate whether the application/proposal was accepted as submitted or with negotiated changes.

Block 19 — Enter any explanation or advisory comments which are required for, or applicable to, this action.

Block 20 — Will be completed by the recipient.

Block 21 — The Contracting Officer shall sign and date the top line. His/her name and title should be entered on the next two lines. This box must be signed prior to forwarding to recipient.

SECTION II -- SPECIAL TERMS AND CONDITIONS

2.1 Prevailing Regulations

As indicated on the face page, Block 18c, this award is subject to the DOE Assistance Regulations of Title 10, Code of Federal Regulations, Part 600. This set of regulations may be found in most major libraries or on the World Wide Web at: <http://www.pr.doe.gov/fahome.html>

2.2 Order of Precedence

In the event of any inconsistency among the provisions of this agreement, the inconsistency shall be resolved by giving precedence as follows: (a) Applicable Public Laws; (b) 10 CFR Part 600; (c) the special terms and conditions or schedule of articles; and (d) other documents, exhibits and attachments.

2.3 Definitions

“Cooperative Agreement” means this agreement between the United States Department of Energy (DOE) and the Recipient, DOE Instrument number _____, and any subsequent amendments.

“Recipient” means [INSERT NAME OF ORGANIZATION SIGNING THE COOPERATIVE AGREEMENT] and its successors and assigns.

“Repayment Agreement” means the agreement made by _____ in DOE Instrument Number _____ on _____, 200_, to repay the DOE share of costs paid under this Cooperative Agreement.

“United States” means the United States of America and its 50 States, the District of Columbia, the Commonwealth of Puerto Rico, and any possession or trust territory of the United States.

2.4 Substantial Involvement Between DOE and the Recipient

a. Recipient Role

The Recipient shall be responsible for all aspects of project performance as set forth in the Statement of Work. All services, personnel, facilities, equipment, materials, and supplies shall be furnished by the Recipient, unless otherwise specified under this Cooperative Agreement. The Recipient Project Director shall serve as its authorized representative for the technical elements of all work to be performed under this Cooperative Agreement. The Recipient Business Officer shall serve as its authorized representative for administrative elements dealing with the Cooperative Agreement.

b. DOE Role

DOE shall monitor the Recipient’s progress in performing the project and shall have a substantial role in project decision making.

The DOE Contracting Officer is the only Government Representative authorized to accept the reports and other deliverables the Recipient is required to provide under this Cooperative Agreement. The DOE Project Officer (same as Contracting Officer’s Representative) shall have the authority to comment on those technical reports, plans, and other technical information the Recipient is required to submit to DOE for review and comment.

The DOE Project Officer shall have the authority to issue written technical advice which suggests redirecting the project work (e.g., by changing the emphasis among different tasks), or pursuing specific lines of inquiry likely to assist in accomplishing the Statement of Work. The DOE Project Officer is not authorized to issue, and the Recipient

is not required to follow, any technical advice which constitutes work which is not within the scope of the Statement of Work; which in any manner causes an increase or decrease in the total estimated cost or in the time required for performance of the project; which has the effect of changing any of the terms or conditions of the Cooperative Agreement; or which interferes with the Recipient's right to perform the project in accordance with the terms and conditions of this Cooperative Agreement.

c. No Government Obligation to Third Parties

In connection with the performance of the project, the Government shall have no obligation or responsibility to any contractor, subcontractor or other person who is not a party to this Cooperative Agreement. The foregoing limitation shall apply notwithstanding the Contracting Officer's prior approval of or consent to any contract awarded by the Recipient. The Recipient shall be responsible, without recourse to DOE, except for amounts DOE is otherwise obligated to pay pursuant to the provisions of this Cooperative Agreement for the resolution and satisfaction of all preaward protests, contract administration issues, and contract disputes arising out of contracts awarded by the Recipient for acquisitions related to the Project.

2.5 Budget Periods and Estimated Project Costs

(A) Budget Periods

The project period of this Cooperative Agreement is divided into three (3) project budget periods, separated by decision points. The Participant's cost share must be at least 50% for the total project, for each project stage, and for each budget period. Budget Period 1 shall end on or before _____, 2002, and will include early design and the submittal of an acceptable Environmental Information Volume, or EIV. If Budget Period 1 is not completed successfully by _____, 2002, the project will be over and must proceed no further. Budget Period 2 will include any remaining design work, as well as construction. Budget Period 3 will include testing and operations, and conclude with the submittal of the Final Report. [The expected duration of Budget Periods 2 and 3 will be established during negotiations.]

(B) Total Estimated Project Costs

DOE and the Participant shall share in allowable direct and indirect project costs in the percentages up to the amounts shown below:

TOTAL ESTIMATED PROJECT COST:\$_____

<u>Budget Period #1</u>	DOE Share:	\$_____%
	Participant Share:	\$_____%
<u>Budget Period #2</u>	DOE Share:	\$_____%
	Participant Share:	\$_____%
<u>Budget Period #3</u>	DOE Share:	\$_____%
	Participant Share:	\$_____%
<u>Total</u>	DOE Share:	\$_____%
	Participant Share:	\$_____%

(C) Budget Revisions

The Recipient may rebudget funds within a total approved budget, subject to the prior approval requirements of 10 CFR § 600.125. The Participant shall obtain prior written approval of the DOE Contracting Officer of any budget revision which would result in the need for additional DOE funding.

(D) Additional Funds

The Participant shall immediately notify the Contracting Officer in writing whenever it becomes apparent that the costs of completing that portion of the Project to be performed during a Budget Period exceeds the Total Approved Budget. Such written notice shall, at a minimum, set forth (1) a detailed explanation of the magnitude and factors causing the cost overrun; (2) a proposed Budget revision detailing the amount of additional funds needed to complete the Project and (3) the amount of additional DOE funds, if any, requested by the Participant.

2.6 Funding

The DOE has currently obligated \$[INSERT FUNDING AMOUNT] and anticipates, subject to the availability of additional funds, obligating the DOE balance of \$[INSERT REMAINING AMOUNT TO BE FUNDED]. The Recipient shall not be obligated to continue performance of this project beyond the amount set forth in Block 16(b)(3) of the DOE F 4600.1 and the DOE is under no commitment to provide additional funding to the Recipient beyond this amount.

2.7 Allowable Preaward Costs

The Recipient is entitled to reimbursement of preaward costs in the amount not to exceed [TBD] of DOE obligations. These costs are limited to work associated with performance of [TBD], incurred during the period starting on [TBD] through the effective start date of this award (Block 7, DOE F 4600.1).

2.8 Cost Sharing

The minimum cost share is 50%. In order to be recognized as allowable cost sharing, a cost must be otherwise allowable in accordance with the applicable Federal cost principles and DOE regulations governing cost sharing. Allowable costs will be shared between DOE and the Recipient on an as expended, dollar-for-dollar basis. Although not all-inclusive, provided below is a list of costs that are unallowable as project costs and, therefore, unallowable for cost sharing:

- Ⓒ Costs incurred in negotiating a Cooperative Agreement with DOE are not allowable as direct charges to the project.
- Ⓒ DOE shall not accept valuation for property sold, transferred, exchanged, or manipulated in any way to acquire a new basis for depreciation purposes or to establish a fair use value in circumstances that would amount to a transaction for the purpose of the Cooperative Agreement.
- Ⓒ DOE will not share in both the direct cost and depreciation on the same item. Depreciation is not allowable for cost sharing on any item charged to the project as a direct cost. For example, DOE will cost share the direct cost on equipment or facilities purchased or constructed for the project; but, will not also cost share the depreciation.
- Ⓒ Interest on borrowings (however represented) and other financial costs such as bond discounts, cost of financing and refinancing capital (net worth plus long-term liabilities), are unallowable project costs. This includes interest on funds borrowed for construction.

- C Facilities capital cost of money shall be an unallowable cost on all real property or equipment acquired by or on behalf of the Participant in connection with the performance of the project.
- C The day-to-day operating costs of the demonstration site will not be recognized as an allowable cost for cost sharing purposes. Only the operating costs directly associated with the proposed work effort (i.e., incremental costs distinct from the daily operational costs) may be recognized as allowable costs for cost-sharing purposes if adequately supported and properly documented.
- C Previously expended research or development costs are unallowable.
- C Forgone fees, forgone profits, or forgone revenues as well as replacement power costs are not allowable costs.
- C Fee or profit paid to any member of the proposing team having a substantial and direct interest in the commercialization of the demonstration technology is unallowable. Competitive subcontracts placed with the prior written consent of the Contracting Officer and subcontracts for routine supplies and services are not covered by this prohibition.
- C The value of patents and data contributed to the project is unallowable.
- C Allowable costs under past, present, or future Federal Government contracts, grants or Cooperative Agreements may not be charged against this Cooperative Agreement. Likewise, the Participant may not charge costs allowable under this project, including any portion of its cost share to the Federal Government under any other contracts, grants, or Cooperative Agreements.
- C Business losses are unallowable.

2.9 Continuation Application

Funding for each budget period within the approved project period shall be contingent on DOE approval of a continuation application submitted no later than 60 days prior to the end of the current budget period. The continuation application shall be submitted on the SF 424 in accordance with 10 CFR 600.26. Forms for submission of continuation applications can be found at <http://www.netl.doe.gov/business/forms/forms.html>.

2.10 Method of Payment

Payment to the Recipient shall be accomplished by the method checked below:

- [TBD] Advance in accordance with 10 CFR 600.122(b)
- [TBD] Reimbursement in accordance with 10 CFR 600.122(e)
- [TBD] Other in accordance with 10 CFR 600.122

The Recipient shall request advances or reimbursements using the Standard Form SF 270, Request for Advance or Reimbursement, and shall complete Blocks 1-11 and 13. Electronic versions of the SF 270 can be found on the NETL Web site at: <http://www.netl.doe.gov/business/forms/forms.html>

Note 1: If the block designating payment by Advance is used, the Recipient is allowed advances not to exceed the funding required to cover expenditures for any succeeding one month time period. Such requests for monthly advances shall be prepared using the Standard Form SF 270 in an original and two (2) copies.

The original is to be submitted to:

U. S. Department of Energy
Oak Ridge Financial Services
P. O. Box 4787
Oak Ridge, TN 37831

The two copies are to be submitted to:

U. S. Department of Energy
National Energy Technology Laboratory
Commercial Payments Center
P. O. Box 10940, MS 921-107
Pittsburgh, PA 15236-0940

Note 2: If the block designating payment by Reimbursement is used, the Recipient shall submit the request for payment for costs incurred using the Standard Form SF 270 in an original and two (2) copies as indicated in Note 1 above. This request shall not be submitted more frequently than monthly.

STATUS OF PAYMENTS

The Oak Ridge Financial Service Center (ORFSC) has a system via Internet, in which Recipients can request information about payments by invoice, by award number, and/or by paid date. The system is called Vendor Inquiry Payment Electronic Reporting System (VIPERS) and is available to Recipients at the following web site: <http://finweb.oro.doe.gov/vipers.htm>. Recipients must have a federal tax identification number (TIN) and then obtain a personal identification number (PIN) to access the system.

2.11 Method of Payment - Payment Management System (PMS) 10 CFR 600.122

Payment Management System (PMS): The Recipient is required to maintain advances of Federal funds in interest-bearing accounts. Any interest income earned by the Recipient on Federal funds must be remitted at least quarterly to the cognizant DOE office. However, up to \$250 of the interest earned per year may be retained by the Recipient to cover administrative expenses.

Funds advanced to the Recipient must be kept to a minimum amount necessary to meet the Recipient's cash flow needs. Cash needs shall be determined by the Recipient's cash outlay requirements and shall not be based on costs incurred. If funds are erroneously drawn in excess of the Recipient's immediate disbursement needs, the excess funds should be promptly refunded and reissued when needed. The only exception to this is when excess funds will be disbursed by the Recipient within seven calendar days or when the excess funds are less than \$10,000 and will be disbursed within thirty (30) calendar days.

A computer-generated report (PMS 272 -- Federal Cash Transaction Report, Status of Federal Cash) will be furnished by the DHHS to all Recipients on a quarterly basis with active PMS accounts. The Recipient will be required to review the report and certify that the data are correct. In addition to returning the certified report to the DHHS, a copy of the report should be sent to the cognizant Contracting Officer. Unsigned reports will be returned and may cause delays in payment if the report due date has passed.

A detailed statement of costs incurred and the cost sharing amount shall be forwarded to the Contracting Officer concurrent with drawdowns from the PMS.

2.12 Notice of Invoice Processing by Support Contractor

A support service contractor performs the function of processing of all invoices submitted to the National Energy Technology Laboratory, against its awards. Therefore, this contractor has access to your business confidential cost/rate information. A special provision in this contractor's award requires the confidential treatment by all contractor employees of any and all business confidential information of other contractors and financial assistance recipients to which they have access.

2.13 Acknowledgment of Federal Funding

When issuing statements, press releases, requests for proposals, bid solicitations, and other documents describing this project, the Recipient shall clearly state (1) the percentage of the total cost of the project which will be financed with Federal money, and (2) the dollar amount of Federal funds for the project.

2.14 Property Management and Disposition

Title to all real property, equipment and supplies (excluding Government-furnished property) acquired by or on behalf of the Participant in connection with performance of the Project shall vest upon acquisition in the Participant. The Participant shall make such property available for use in the Project. During the period of the Cooperative Agreement, the Participant may, with the DOE Contracting Officer's prior approval, encumber its title to or dispose of such property. Should said property be sold or Participant receive financial benefit from the property disposition, the Participant shall share the financial benefit with the DOE in the same share ratio as the total project cost sharing.

The cost of disposal of the Demonstration Facility is an allowable cost only if proposed and included in the cost estimate for Stage III - Operations.

The use, management, and disposition of all government-furnished property shall be governed by 10 CFR 600.130 thru 600.137.

2.15 Federally Owned Property (Government-Furnished) - None

It is not anticipated that any Government-furnished property will be provided under this award.

2.16 Key Personnel

Recipient personnel considered to be essential and key to the work being performed hereunder are specified below.

<u>NAME</u>	<u>TITLE</u>	<u>TELEPHONE</u>
[TBD]	[TBD]	[TBD]

The personnel specified in this clause are considered to be essential to the project. Before diverting any key personnel to work outside the scope of this award, the Recipient shall notify the Contracting Officer reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on the project. No key personnel may be substituted without the Contracting Officer's approval. Such approval shall be obtained in advance of the substitution, except that the Contracting Officer may ratify a substitution which, because of exigent circumstances, was made before the Recipient could request and/or obtain the Contracting Officer's approval.

2.17 Project Site and Access

The project shall be performed principally at the following site(s): [identify location/address of project site]. At the request of the DOE Contracting Officer or the COR, the Participant shall provide Government officials and interested members of the public as determined by DOE with access to the project site(s) to observe project operations at reasonable times and with reasonable limitations on the numbers of people during each visit.

2.18 Paper Work Reduction

The award is subject to the requirements of the Paperwork Reduction Act of 1980 as implemented by the Office of Management and Budget rules, "Controlling Paperwork Burdens on the Public," published at 5 CFR 1320. These requirements apply if the Recipient will collect information from ten (10) or more respondents at the specific request of DOE, or if the award requires specific DOE approval of the information collection or the collection procedures.

The Recipient shall submit any proposed sponsored information collection to the person identified on the DOE F 4600.1 (Award Face Page, Block 12). The proposal shall be submitted at least 120 days prior to the intended date of information collection. DOE will seek the requisite approval from the Office of Management and Budget (OMB) and will promptly notify the Recipient of the disposition of the request.

2.19 Nondiscrimination

This award is subject to the provisions of 10 CFR 1040, "Nondiscrimination in Federally Assisted Programs."

2.20 Public Access to Information

The Freedom of Information Act, as amended, and the DOE implementing regulations (10 CFR 1004) require DOE to release certain documents and records regarding awards to any person who provides a written request. The intended use of the information will not be a criterion for release.

2.21 National Security

It is not expected that activities under the award will generate or otherwise involve classified information (i.e., Restricted Data, Formerly Restricted Data, National Security Information).

However, if in the opinion of the Recipient or DOE such involvement becomes expected prior to the closeout of the award, the Recipient or DOE shall notify the other in writing immediately. If the Recipient believes any information developed or acquired may be classifiable, the Recipient shall not provide the potentially classifiable information to anyone, including the DOE officials with whom the Recipient normally communicates, except the Director of Classification, and shall protect such information as if it were classified until notified by DOE that a determination has been made that it does not require such handling. Correspondence which includes the specific information in question shall be sent by registered mail to U.S. Department of Energy, Attn.: Executive Assistant for Defense Programs, DP-4, 4A-019/FORS, 1000 Independence Avenue, Washington, D.C. 20585. If the information is determined to be classified, the Recipient may wish to discontinue the project, in which case the Recipient and DOE shall terminate the award by mutual agreement. If the award is to be terminated, all materials deemed by DOE to be classified shall be forwarded to DOE, in a manner specified by DOE, for proper disposition. If the Recipient and DOE wish to continue the award, even though classified information is involved, the Recipient shall be required to obtain both personnel and facility security clearances through the Office of Safeguards and Security for Headquarters awarded awards obtained through DOE field organizations. Costs associated with handling and protecting any such classified information shall be negotiated at the time the determination to proceed is made.

2.22 Compliance With Buy American Act

In accepting this award, the Recipient agrees to comply with sections 2 through 4 of the Act of March 3, 1933 (41 U.S.C. 10a-10c, popularly known as the "Buy American Act"). The Recipient should review the provisions of the Act to ensure that expenditures made under this award are in accordance with it.

2.23 Notice Regarding the Purchase of American-Made Equipment and Products -- Sense of Congress

It is the sense of the Congress, that to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made.

2.24 Lobbying Restriction (Department of Interior and Related Agencies Appropriations Act, 2000)

The awardee agrees that none of the funds obligated on this award shall be made available for any activity or the publication or distribution of literature that in any way tends to promote public support or opposition to any legislative proposal on which Congressional action is not complete. This restriction is in addition to those prescribed elsewhere in statute and regulation.

A copy of the DOE "Lobbying Brochure" which provides a summary of the statutory and regulatory restrictions regarding lobbying activities for Federal contractors can be found at (<http://www.pr.doe.gov/lobbying.html>).

2.25 Notice Regarding Unallowable Costs and Lobbying Activities

Recipients of financial assistance are cautioned to carefully review the allowable cost and other provisions applicable to expenditures under their particular award instruments. If financial assistance funds are spent for purposes or in amounts inconsistent with the allowable cost or any other provisions governing expenditures in an award instrument, the government may pursue a number of remedies against the Recipient, including in appropriate circumstances, recovery of such funds, termination of the award, suspension or debarment of the Recipient from future awards, and criminal prosecution for false statements.

Particular care should be taken by the Recipient to comply with the provisions prohibiting the expenditure of funds for lobbying and related activities. Financial assistance awards may be used to describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not to encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.

2.26 Year 2000 Compliance

The Recipient assures, by acceptance of this award, that items delivered under this cooperative agreement are year 2000 compliant.

2.27 Reporting

Failure to comply with the reporting requirements contained in this award will be considered a material noncompliance with the terms of the award. Noncompliance may result in a withholding of future payments, suspension or termination of the current award, and withholding of future awards. A willful failure to perform, or a history of unsatisfactory performance on this and/or other financial assistance awards, may also result in a debarment action to preclude future awards by Federal agencies.

2.28 Research Involving Recombinant DNA Molecules

Any Recipient performing research involving recombinant DNA molecules and/or organisms and viruses containing recombinant DNA molecules agrees by acceptance of this award to comply with the National Institute of Health "Guidelines for Research Involving Recombinant DNA Molecules," (59 FR 34496, July 5, 1994 as amended by 59 FR 40170, 60 FR 20726, 61 FR 1482, 61 FR 10004, 62 FR 53335, 62 FR 56196, 62 FR 59032 and 63 FR 8052, "subject to change - call 301-496-9838 to obtain reference to a current version.")

2.29 Safety & Health and Environmental Protection

The Recipient shall implement the DOE work in accordance with all applicable Federal, State, and local laws, including codes, ordinances, and regulations, covering safety, health, and environmental protection.

The Recipient agrees to include this clause in first-tier subcontracts and agrees to enforce the terms of this clause.

2.30 Permits and Licenses

Within sixty (60) days of award, the Recipient shall submit to the DOE Contracting Officer's Representative (COR) a list of ES&H approvals that, in the Recipient's opinion, shall be required to complete the work under this award. The list shall include the topic of the approval being sought, the approving authority, and the expected submittal/approval schedule. The COR shall be notified as specific items are added or removed from the list and processed through their approval cycles.

The Recipient agrees to include this clause in first-tier subcontracts and agrees to enforce the terms of this clause.

2.31 National Environmental Policy Act (NEPA) -- Prior Approvals

The National Environmental Policy Act of 1969 (NEPA) requires that all Federal agencies consider the impacts of their projects on the human environment. As part of the DOE's NEPA requirements, the Recipient shall be required to supply to the DOE certain environmental information. DOE funds may only be expended by the Recipient on [INSERT ACTIVITIES THAT CAN BE PERFORMED UNTIL THE NEPA DOCUMENT IS SIGNED, e.g., preliminary designs or drawings] activities, or in a manner inconsistent with 40 CFR 1506.1, until DOE notifies the Recipient that all NEPA requirements have been satisfied.

2.32 Insurance

In addition to any insurance which is required under paragraph (A) and which may be required under paragraph (B) of this article, the Participant shall acquire and thereafter maintain workmen's compensation, employer's liability, comprehensive general liability (bodily injury), and comprehensive automobile liability (bodily injury and property damage) insurance, and such other insurance coverage as the Participant normally carries for similar projects. With the approval of the DOE Contracting Officer, the Participant may maintain a self-insurance program for any of the coverages specified in this Article; provided that, with respect to workmen's compensation, the Participant is qualified under applicable statutory and regulatory authority. All insurance required pursuant to the provisions of this Article shall be in such form, in such amounts, for such periods of time, and provided by such insurance carriers as the DOE Contracting Officer may approve.

(A) Hazards (Property Damage)

The Participant will provide hazard insurance (theft, fire, windstorm, water damage, etc.) covering the materials, equipment, and structures acquired or constructed under this Cooperative Agreement. Proceeds from such insurance may be used to replace the damaged or destroyed property. If the Participant decides not to replace or repair the property, the insurance proceeds will be paid to DOE in the same ratio as the cost share formula applicable to the budget period of the Cooperative Agreement when the equipment or property was purchased.

(B) Flood Insurance

If funds under this Cooperative Agreement are used to acquire or construct property or equipment for use in an identified flood plain area in the United States having special flood, special flood-related erosion, or special mudslide (i.e., mud-flow) hazards, the Participant shall obtain flood

insurance as required by the Flood Disaster Protection Act of 1973 (42 U.S.C. 4002, 4012a, 4105), as amended. Proceeds from such insurance may be used to replace the damaged or destroyed property. If the Participant decides not to replace or repair the property, the insurance proceeds will be paid to DOE in the same ratio as the cost share formula applicable to the budget period of the Cooperative Agreement when the equipment or property was purchased.

2.33 Limitation of DOE Liability

Awards under this part are subject to the requirement that the maximum DOE obligation to the recipient is the amount shown in the Notice of Financial Assistance Award as the amount of DOE funds obligated. DOE shall not be obligated to make any additional, supplemental, continuation, renewal or other awards for the same or any other purpose.

2.34 Bonding for Construction

The Participant shall require any construction contractor or subcontractor to obtain performance and payment bonds for any construction project in accordance with practices approved by the Contracting Officer.

2.35 Termination (Cost-Reimbursement). 52.249-6

The Cooperative Agreement may be terminated in accordance with 10 CFR 600.161.

2.36 Records Retention, Access, and Disclosure

(A) Period of Retention

The Participant shall retain all financial and performance records, supporting documents, statistical records, and other records of the Participant which are required to be retained by the terms of this Cooperative Agreement, and any other records the Participant reasonably considers to be pertinent to this Cooperative Agreement. The period of required retention shall be from the date each such record is created or received by the Participant until three years after one of the following dates, whichever is latest: the expiration date of this Cooperative Agreement; the date the Participant's final expenditure report is submitted to DOE; or if this Cooperative Agreement is terminated in its entirety, the effective date of the termination. If any claim, litigation, negotiation, investigation, audit, or other action involving the records starts before the expiration of the three-year retention period, the Participant shall retain the records until such action is completed and all related issues are resolved, or until the end of the three-year retention period, whichever is later.

(B) Authorized Copies

Copies made by microfilm, photocopying, or similar methods may be substituted for original records. Records originally created by computer may be retained on an electronic medium, provided such medium is "read only" or is protected in such a manner that the electronic record can be authenticated as an original record.

(C) Access to Records

Subject to any legitimate claims of Attorney/Client Privilege as determined by a court of competent jurisdiction, DOE and the Comptroller General of the United States, or any of their authorized representatives, shall have the right of access to any books, documents, papers, or other records (including those on electronic media) which are pertinent to this Cooperative Agreement. The purpose of such access is limited to the making of audits, examinations, excerpts, and transcripts. The right of access described in this paragraph shall last as long as the Participant retains records which are pertinent to this Cooperative Agreement.

(D) Restrictions on Public Disclosure

The Federal Freedom of Information Act 5 USC §552 does not apply to records the Participant is required to retain by the terms of this Cooperative Agreement to the extent that the records are not also in the possession of the Government. Unless otherwise required by law or a court of competent jurisdiction, the Participant shall not be required to disclose such records to the public.

2.37 Severability

If a court of competent jurisdiction or the DOE Financial Assistance Appeals Board determines that any part of this Cooperative Agreement is invalid, void, unenforceable, or inconsistent with any applicable Federal statute or regulation, such part shall be deemed to have been amended or deleted to conform to such determination.

2.38 Performance of Work in the United States

As a condition of award under this solicitation, the Recipient agrees that at least 75% of the direct labor cost for the project (including subcontractor labor) will be incurred in the United States unless the Recipient can demonstrate to the satisfaction of DOE that the United States economic interest will be better served through a greater percentage of the work performed outside the United States. For example, a recipient may provide evidence that expertise to develop a technology exists only outside the United States, but that ultimate commercialization of the technology will result in substantial benefits to the United States such as improved electricity reliability, increased employment, increased exports of U.S.-manufactured products, etc.

2.39 Subcontracts and Other Agreements

Subcontracts or agreements will not contain provisions that are inconsistent with the Cooperative Agreement nor would adversely affect the ability of the Recipient to perform its obligations under this Cooperative Agreement. The following named contracts, subcontracts, licenses, and agreements require prior review and approval by the Contracting Officer prior to execution:

Name of Subcontractor

Name of Subcontractor

The request or approval documentation shall consist of an analysis of the reasonableness of the costs inclusive of the rationale for selection of the supplier, and the procurement, scope, terms, and conditions consistent with the Recipient's standard procurement practices. Best efforts will be made to approve or comment on submitted documents within ten (10) business days of receipt and such approval will not be unreasonably withheld.

SECTION III -- INTELLECTUAL PROPERTY PROVISIONS

3.1 Intellectual Property Provisions

The patent and technical data clauses included in this section apply to this award. As used in these applicable clauses, the term "Patent Counsel" refers to the following point of contact:

Intellectual Property Law Division
U.S. Department of Energy
Chicago Operations Office
9800 South Cass Avenue
Argonne, IL 60439

In any of the FAR and DEAR clauses contained in this section, use of the term "Contract" means "Award" and "Contractor" means "Recipient."

The Recipient shall include intellectual property clauses in any cooperative agreement awarded in accordance with requirements of the clauses in this section and of 10 CFR Part 600.27.

3.2 Publication of Results/Acknowledgment Statement

Publication of the results of the award is encouraged subject to any applicable restrictions in 10 CFR 600.27 (Patent and Data Provisions). Publications, as well as reports prepared under this award, shall contain the following acknowledgment statement:

"This (describe material) was prepared with the support of the
U.S. Department of Energy, under Award No. DE-[**TBD**].
However, any opinions, findings, conclusions, or
recommendations expressed herein are those of the author(s)
and do not necessarily reflect the views of the DOE."

3.3 Recipient Press Releases

The DOE policy and procedure on planned press releases requires that all Recipient press releases be reviewed and approved by DOE prior to issuance. Therefore, the Recipient shall, at least ten (10) calendar days prior to the planned issue date, submit a draft copy to the Contracting Officer of any planned press releases related to work performed under this award. The Contracting Officer will then obtain necessary reviews and clearances and provide the Recipient with the results of such reviews prior to the planned issue date.

3.4 Confidential Business Information

Data represented to the Department as being confidential business information, and which does not include "Technical Data" as that term is defined in 52.227-14 Rights in Data General clause of this agreement, shall be submitted as an attachment to the required reports and will be withheld from disclosure outside NETL to the extent permitted by law, provided such attachment and each page therein is stamped with the following legend and no other:

CONFIDENTIAL BUSINESS INFORMATION

The Recipient considers the data furnished herein to contain confidential business information which is to be withheld from disclosure outside NETL to the extent permitted by law.

3.5 Patent and Data Provisions

The cooperative agreement will include the following patent and data provisions in accordance with 10 C.F.R. 600.27:

48 CFR (DEAR) 952.227-13, Patent rights-acquisition by the Government OR

48 CFR (DEAR) 952.227-11, Patent rights-retention by the contractor (short form)

48 CFR (FAR) 52.227-16 -- Additional Data Requirements

48 CFR (FAR) 52.227-1 -- Authorization and Consent, Alt. I

48 CFR (FAR) 52.227-2 -- Notice and Assistance Regarding Patent and Copyright Infringement

48 CFR (FAR) 52.227-23 -- Rights to Proposal/Application Data

48 CFR (FAR) 52.227-3 -- Patent Indemnity

48 CFR (FAR) 52.227-6 -- Royalty Information

In addition, the following provisions will be included:

3.6 52.227-14 Rights in Data - General With Alternates II, III, V and VI, as modified by DEAR 927.409 (Effective Apr 1998)

(a) *Definitions.*

(1) *Computer data bases*, as used in this clause, means a collection of data in a form capable of, and for the purpose of, being stored in, processed, and operated on by a computer. The term does not include computer software.

(2) *Computer software*, as used in this clause, means (i) computer programs which are data comprising a series of instructions, rules, routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations and (ii) data comprising source code listings, design details, algorithms, processes, flow charts, formulae, and related material that would enable the computer program to be produced, created, or compiled. The term does not include computer data bases.

(3) *Data*, as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. For the purposes of this clause, the term does not include data incidental to the administration of this contract, such as financial, administrative, cost and pricing, or management information.

(4) *Form, fit, and function data*, as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability, as well as data identifying source, size, configuration, mating, and attachment characteristics, functional characteristics, and performance requirements; except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

(5) *Limited rights data*, as used in this clause, means data, other than computer software, developed at private expense that embody trade secrets or are commercial or financial and confidential or privileged. The Government's rights to use, duplicate, or disclose limited rights data are as set forth in the Limited Rights Notice of subparagraph (g)(2) of this section if included in this clause.

(6) *Restricted computer software*, as used in this clause, means computer software developed at private expense and that is a trade secret; is commercial or financial and is confidential or privileged; or is published copyrighted computer software, including minor modifications of any such computer software. The Government's rights to use, duplicate, or disclose restricted computer software are as set forth in the Restricted Rights Notice of subparagraph (g)(3) of this section if included in this clause.

(7) *Technical data*, as used in this clause, means recorded data, regardless of form or characteristic, that are of a scientific or technical nature. Technical data does not include computer software, but does include manuals and instructional materials and technical data formatted as a computer data base.

(8) *Unlimited rights*, as used in this clause, means the rights of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, including by electronic means, and perform publicly and display publicly, in any manner, including by electronic means, and for any purpose whatsoever, and to have or permit others to do so.

(9) *Protected Power Plant Improvement Initiative Data*, as used in this clause, means technical data or commercial or financial data first produced in the performance of this Agreement which, if it had been obtained from and first produced by a Non-Federal party, would be a trade secret or commercial or financial information that is privileged or confidential under the meaning of 5 U.S.C. 552 (b)(4), and which is marked as being Protected Power Plant Improvement Initiative Data by a Party to this Agreement.

(b) *Allocation of rights.*

(1) Except as provided in paragraph (c) below regarding copyright, the Government shall have unlimited rights in:

- (i) Data first produced in the performance of this contract except as otherwise provided in this Agreement with respect to Protected Power Plant Improvement Initiative Technology Data;
- (ii) Form, fit, and function data delivered under this contract;
- (iii) Data delivered under this contract (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair items, components, or processes delivered or furnished for use under this contract; and
- (iv) All other data delivered under this contract unless provided otherwise for limited rights data or restricted computer software in accordance with paragraph (g) below.

(2) The Contractor shall have the right to:

- (i) Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, unless provided otherwise in paragraph (d) below;
- (ii) Protect from unauthorized disclosure and use those data which are limited rights data or restricted computer software to the extent provided in paragraph (g) below;
- (iii) Substantiate use of, add or correct limited rights, restricted rights, or copyright notices and to take other appropriate action, in accordance with paragraphs (e) and (f) below; and
- (iv) Establish claim to copyright subsisting in data first produced in the performance of this contract to the extent provided in subparagraph (c)(1) below.

(c) *Copyright.*

(1) Data first produced in the performance of this contract. Unless provided otherwise in subparagraph (d) below, the Contractor may establish, without prior approval of the Contracting Officer, claim to copyright subsisting in scientific and technical articles based on or containing data first produced in the performance of this contract and published in academic, technical or professional journals, symposia proceedings or similar works. The prior, express

written permission of the Contracting Officer is required to establish claim to copyright subsisting in all other data first produced in the performance of this contract. When claim to copyright is made, the Contractor shall affix the applicable copyright notices of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. For data other than computer software the Contractor grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable worldwide license in such copyrighted data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government. For computer software, the Contractor grants to the Government and others acting in its behalf, a paid-up nonexclusive, irrevocable worldwide license in such copyrighted computer software to reproduce, prepare derivative works, and perform publicly and display publicly by or on behalf of the Government.

(2) Data not first produced in the performance of this contract. The Contractor shall not, without prior written permission of the Contracting Officer, incorporate in data delivered under this contract any data not first produced in the performance of this contract and which contains the copyright notice of 17 U.S.C. 401 and 402, unless the Contractor identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph (1) above; provided, however, that if such data are computer software the Government shall acquire a copyright license as set forth in subparagraph (g)(3) below if included in this contract or as otherwise may be provided in a collateral agreement incorporated in or made part of this contract.

(3) Removal of copyright notices. The Government agrees not to remove any copyright notices place on data pursuant to this paragraph (c), and to include such notices on all reproductions of the data.

(d) Release, publication and use of data.

(1) The Contractor shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract, except to the extent such data may be subject to the Federal export control or national security laws or regulations, or unless otherwise provided below in this paragraph or expressly set forth in this contract.

(2) The Contractor agrees that to the extent it receives or is given access to data necessary for the performance of this contract which contain restrictive markings, the Contractor shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by the Contracting Officer.

(3) The Contractor agrees not to assert copyright in computer software first produced in the performance of this contract without prior written permission of the DOE Patent Counsel assisting the contracting activity. When such permission is granted, the Patent Counsel shall specify appropriate terms, conditions, and submission requirements to assure utilization, dissemination, and commercialization of the data. The Contractor, when requested, shall promptly deliver to Patent Counsel a duly executed and approved instrument fully confirmatory of all rights to which the Government is entitled.

(e) Unauthorized marking of data.

(1) Notwithstanding any other provisions of this contract concerning inspection or acceptance, if any data delivered under this contract are marked with the notices specified in subparagraphs (g)(2) or (g)(3) below and use of such is not authorized by this clause, or if such data bears any other restrictive or limiting markings not authorized by this contract, the Contracting Officer may at any time either return the data to the Contractor, or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings.

(i) The Contracting Officer shall make written inquiry to the contractor affording the Contractor 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

(ii) If the Contractor fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the Contracting Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period and the data will not longer be made subject to any disclosure prohibitions.

(iii) If the Contractor provides written justification to substantiate the propriety of the markings within the period set in subdivision (i) above, the Contracting Officer shall consider such written justification and determine whether or not the markings are to be canceled or ignored. If the Contracting Officer determines that the markings are authorized, the Contractor shall be so notified in writing. If the Contracting Officer determines, with concurrence of the Head of the Contracting Activity, that the markings are not authorized, the Contracting Officer shall furnish the Contractor a written determination, which determination shall become the final agency decision regarding the appropriateness of the markings unless the Contractor files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government shall continue to abide by the markings under this subdivision (iii) until final resolution of the matter either by the Contracting Officer's determination becoming final (in which instance the Government shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

(2) The time limits in the procedures set forth in subparagraph (1) above may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.

(3) This paragraph (e) does not apply if this contract is for a major system or for support of a major system by a civilian agency other than NASA and the U.S. Coast Guard subject to the provisions of Title III of the Federal Property and Administrative Services Act of 1949.

(4) Except to the extent the Government's action occurs as the result of final disposition of the matter by a court of competent jurisdiction, the Contractor is not precluded by this paragraph (e) from bringing a claim under the Contract Disputes Act, including pursuant to the Disputes clause of this contract, as applicable, that may arise as the result of the Government removing or ignoring authorized markings on data delivered under this contract.

(f) *Omitted or incorrect markings.*

(1) Data delivered to the Government without either the limited rights or restricted rights notice as authorized by paragraph (g) below, or the copyright notice required by paragraph (c) above, shall be deemed to have been furnished with unlimited rights, and the Government assumes no liability for disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government, the Contractor may request, within 6 months (or a longer time approved by the Contracting Officer for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Contractor's expense, and the Contracting Officer may agree to do so if the Contractor:

(i) Identifies the data to which the omitted notice is to be applied;

(ii) Demonstrates that the omission of the notice was inadvertent;

(iii) Establishes that the use of the proposed notice is authorized; and

(iv) Acknowledges that the Government has no liability with respect to the disclosure, use, or reproduction of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(2) The Contracting Officer may also (i) permit correction at the Contractor's expense of incorrect notices if the Contractor identifies the data on which correction of the notice is to be made, and demonstrates that the correct notice is authorized, or (ii) correct any incorrect notices.

(g) Protection of limited rights data and restricted computer software.

(1) When data other than that listed in subparagraphs (b)(1)(i), (ii), and (iii) above are specified to be delivered under this contract and qualify as either limited rights data or restricted computer software, if the Contractor desires to continue protection of such data, the Contractor shall withhold such data and not furnish them to the Government under this Contract. As a condition to this withholding, the Contractor shall identify the data being withheld and furnish form, fit, and function data in lieu thereof. Limited rights data that are formatted as a computer data base for delivery to the Government is to be treated as limited rights data and not restricted computer software.

(2) Notwithstanding subparagraph (g)(1) of this clause, the contract may identify and specify the delivery of limited rights data, or the Contracting Officer may require by written request the delivery of limited rights data that has been withheld or would otherwise be withholdable. If delivery of such data is so required, the Contractor may affix the following "Limited Rights Notice" to the data and the Government will thereafter treat the data, subject to the provisions of paragraphs (e) and (f) of this clause, in accordance with such Notice:

LIMITED RIGHTS NOTICE (JUN 1987)

(a) These data are submitted with limited rights under Government Contract No. _____ (and subcontract _____, if appropriate). These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Contractor, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any; provided that the Government makes such disclosure subject to prohibition against further use and disclosure: [Agencies may list additional purposes as set forth in 27.404(d)(1) or if none, so state.]

(b) This Notice shall be marked on any reproduction of these data, in whole or in part.

(End of notice)

(3)(i) Notwithstanding subparagraph (g)(1) of this clause, the contract may identify and specify the delivery of restricted computer software, or the Contracting Officer may require by written request the delivery of restricted computer software that has been withheld or would otherwise be withholdable. If delivery of such computer software is so required, the Contractor may affix the following "Restricted Rights Notice" to the computer software and the Government will thereafter treat the computer software, subject to paragraphs (e) and (f) of this clause, in accordance with the Notice:

RESTRICTED RIGHTS NOTICE (JUN 1987)

(a) This computer software is submitted with restricted rights under Government Contract No. [] (and subcontract [], if appropriate). It may not be used, reproduced, or disclosed by the Government except as provided in paragraph (b) of this Notice or as otherwise expressly stated in the contract.

(b) This computer software may be -

(1) Used or copied for use in or with the computer or computers for which it was acquired, including use at any Government installation to which such computer or computers may be transferred;

(2) Used or copied for use in a backup computer if any computer for which it was acquired is inoperative;

(3) Reproduced for safekeeping (archives) or backup purposes;

(4) Modified, adapted, or combined with other computer software, provided that the modified, combined, or adapted portions of the derivative software incorporating restricted computer software are made subject to the same restricted rights;

(5) Disclosed to and reproduced for use by support service Contractors in accordance with subparagraphs (b)(1) through (4) of this clause, provided the Government makes such disclosure or reproduction subject to these restricted rights; and

(6) Used or copied for use in or transferred to a replacement computer.

(c) Notwithstanding the foregoing, if this computer software is published copyrighted computer software, it is licensed to the Government, without disclosure prohibitions, with the minimum rights set forth in paragraph (b) of this clause.

(d) Any other rights or limitations regarding the use, duplication, or disclosure of this computer software are to be expressly stated in, or incorporated in, the contract.

(e) This Notice shall be marked on any reproduction of this computer software, in whole or in part.

(End of notice)

(ii) Where it is impractical to include the Restricted Rights Notice on restricted computer software, the following short-form Notice may be used in lieu thereof:

RESTRICTED RIGHTS NOTICE SHORT FORM (JUN 1987)

Use, reproduction, or disclosure is subject to restrictions set forth in Contract No. [] (and subcontract, if appropriate) with [] (name of Contractor and subcontractor).

(End of notice)

(iii) If restricted computer software is delivered with the copyright notice of 17 U.S.C. 401, it will be presumed to be published copyrighted computer software licensed to the Government without disclosure prohibitions, with the minimum rights set forth in paragraph (b) of this clause, unless the Contractor includes the following statement with such copyright notice: "Unpublished - rights reserved under the Copyright Laws of the United States."

(h) *Subcontracting.*

The Contractor has the responsibility to obtain from its subcontractors all data and rights therein necessary to fulfill the Contractor's obligations to the Government under this contract. If a subcontractor refuses to accept terms affording the Government such rights, the Contractor shall promptly bring such refusal to the attention of the Contracting Officer and not proceed with subcontract award without further authorization.

(i) *Relationship to patents.*

Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government.

(j) The Contractor agrees, except as may be otherwise specified in this contract for specific data items listed as not subject to this paragraph, that the Contracting Officer or an authorized representative may, up to three years after acceptance of all items to be delivered under this contract, inspect at the Contractor's facility any data withheld pursuant to paragraph (g)(1) above, for purposes of verifying the Contractor's assertion pertaining to the limited rights or restricted rights status of the data or for evaluating work performance. Where the Contractor whose data are to be inspected demonstrates to the Contracting Officer that there would be a possible conflict of interest if the inspection were made by a particular representative, the Contracting Officer shall designate an alternate inspector.

(k) *Participant licensing.* Except as may be otherwise specified in this contract as data not subject to this paragraph, the contractor agrees that upon written application by DOE, it will grant to the Government and responsible third parties a nonexclusive license in any limited rights data, and it will grant to responsible third parties a nonexclusive license in any data which are Protected Power Plant Improvement Initiative Data, for purposes of practicing a subject of this contract, on terms and conditions reasonable under the circumstances including appropriate provisions for confidentiality; provided, however, the contractor shall not be obligated to license any such data if the contractor demonstrates to the satisfaction of the Secretary of Energy or designee that:

- (1) Such data are not essential to the manufacture or practice of hardware designed or fabricated, or processes developed, under this contract; or
- (2) Such data, in the form of results obtained by their use, are being supplied by the contractor or its licensees in sufficient quantity and at reasonable prices to satisfy market needs, or the contractor or its licensees have taken effective steps or within a reasonable time are expected to take effective steps to so supply such data in the form of results obtained by their use.

3.7 Availability of contract and other data.

- (a) The Participant will, for the entire period of Participant's participation in the project at the Facility (including operation of the Facility) and for three years thereafter, whether or not under a Government Cooperative Agreement, keep and maintain all technical data, including limited rights data and data obtained from subcontractors and licensors, necessary to construct and/or operate the Facility, and all data including business and financial data necessary to evaluate the technical and economic operation of the Facility. During the entire period of construction and/or operation of the Facility, regardless of whether the Government participates past Phase I, the Participant shall permit the Government and its representative the right to inspect at the Facility any data kept and maintained pursuant to this paragraph. The Participant shall, after termination of the Government's participation in the project at the facility, periodically deliver reports to the Government on the construction and operation of the facility, which reports shall not include limited rights data.
- (b) If the Participant withdraws from this Cooperative Agreement or defaults after Phases I or II, the Government shall have the right to have all data kept and maintained pursuant to Paragraph (a) above, delivered to the Government or otherwise disposed of as the Contracting Officer shall direct upon such termination. Any limited rights data delivered pursuant to this paragraph shall be marked as provided in Paragraph (g) above with the addition to the legend thereof as follows: (4) This "limited rights data" may be used by

Government or others on its behalf in confidence to the extent necessary to enable the Government to complete Phases II and/or III.

- (c) The Participant agrees to and does hereby grant to the Government or others acting on its behalf, an irrevocable nonexclusive paid-up license in and to any limited rights data of the Participant which are incorporated or embodied in the design or construction or utilized in the operation of the Facility: (1) to practice, or to have practiced, by or for the Government at the Facility, and (2) to transfer such license with the transfer of that Facility. Further, the Participant agrees to obtain an equivalent license from its contractors, subcontractors, and licensors, if any. The license granted pursuant to this subparagraph shall be for the limited purpose of completion, repair or operation of the demonstration facility.

NOTE: *The following clause shall not apply to domestic small business firms or nonprofit organizations. However, such entities are expected to use their best efforts to commercialize the technology being demonstrated under any resulting cooperative agreement.*

3.8 Commercialization of _____ Technology.

- (a) In addition to or in assistance of any rights acquired by the Government in _____ Technology from the Participant under paragraph (k) of the Patents Clause and paragraph (k) of the Rights in Data-General Clause, the Participant agrees to negotiate in good faith with a responsible applicant and to conclude an agreement with such applicant to provide a commercial-size facility incorporating _____ Technology in the United States equal to or a scaled-up or modified version of the _____ facility which is a subject of this Cooperative Agreement. The Agreement shall, as appropriate to the circumstances, include provisions for licensing patented and unpatented _____ Technology including background patents, waived subject inventions, limited rights data, know-how and copyrighted works including improvements or enhancements of any of the foregoing as well as provisions for technical assistance and training.
- (b) The services and/or licenses specified in paragraph (a) of this clause shall be made available to responsible applicants to construct or have constructed, operate or have operated a facility incorporating _____ Technology in the United States under reasonable terms and conditions taking into consideration accepted licensing standards or norms in the relevant U.S. industry as well as accepted levels of return on investment for such activities and/or services.
- (c) In the event that the Participant and the applicant cannot reach agreement after one year from the start of diligent and responsible negotiations between them, the applicant shall have the right of a third party beneficiary to maintain an action in a court of competent jurisdiction to force licensing on reasonable terms and conditions. Any assignment of the invention must be made subject to these requirements.
- (d) The provisions of paragraphs (a), (b), and (c) of this clause shall not apply as long as the Participant or its licensees are supplying U.S. market needs at reasonable prices for _____ systems.
- (e) The Participant agrees to obtain sufficient rights to meet its commitments to commercialize and/or license _____ Technology.

- (f) The Participant agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell _____ technology in the United States unless such person agrees that any embodiment of _____ technology will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by DOE upon a showing by the Participant or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.
- (g) For the purposes of this section, technology is ... (Define the equipment to be provided with the sale of the technology or necessary to achieve the performance under the license of the technology; this may include equipment in addition to that which is included in the Demonstration Project).

3.9 [Reserved.] (It is expected that this paragraph will include provisions that certain types of specified, mutually agreed upon data will be available to the public and will not be asserted by the Participant as proprietary or Protected Power Plant Improvement Initiative data.)

3.10 Protected Power Plant Improvement Initiative (PPII) Data.

- (a) Notwithstanding any other provisions of the Rights in Data-General clause, the Participant may, with concurrence of DOE, (i) claim and mark as Protected Power Plant Improvement Initiative Data any data first produced in the performance of this Agreement by its employees, and (ii) so claim and mark, following mutual agreement of the other party, any data first produced in the performance of this Agreement by the other party's employees.
- (b) Any such claimed Protected Power Plant Improvement Initiative Data will be clearly marked as "Protected Power Plant Improvement Initiative Data", will be treated as such, and, except as otherwise provided herein, will not be published, disseminated or disclosed to others outside the Government by the Government for a period, as approved by DOE, of [up to five (5) years after completion of the operations phase of this Agreement,]* without the prior written authorization of the Participant. The marking shall include the following legend and such other restrictions or limitations on use or disclosure as may be applicable or appropriate.

Note: The period for protection of such data is fully negotiable, but cannot exceed five years after completion of the operations phase of the particular Agreement.

PROTECTED POWER PLANT IMPROVEMENT INITIATIVE DATA

This Protected Power Plant Improvement Initiative Data was produced under a Cooperative Agreement identified as _____ under a DOE Power Plant Improvement Initiative Project and may not be published, disseminated or disclosed to others by the Government until [_____ years after completion of the operations phase of the above Cooperative Agreement,]* unless express written authorization is obtained from _____ (the Participant). Upon expiration of the period of protection set forth in this legend, the Government shall have unlimited rights in this data. This legend shall be marked on any reproduction of this data, in whole or in part.

- (c) Any such marked Protected Power Plant Improvement Initiative Data may be disclosed under obligations of confidentiality for the following purposes:

- (1) The Protected Power Plant Improvement Initiative Data may be disclosed to other parties and contractors performing work under the DOE Power Plant Improvement Initiative Project of which this Cooperative Agreement is a part, for information and use in performing work under the Project only.
- (2) The Protected Power Plant Improvement Initiative Data may be disclosed to and used by others if necessary for emergency repair or overhaul work at the Facility and to others working under the Project for purposes of evaluation.
- (d) Any such marked Protected Power Plant Improvement Initiative Data shall, upon the request of DOE, be made available to the other Participants in this DOE Power Plant Improvement Initiative Project, subject to the restrictions on disclosure, publication, and dissemination in the Legend, for use in performing work or monitoring progress under the Project and for their use in utilizing and commercializing the technology being developed under the Project.
- (e) The Participant shall have the right to license such Protected Power Plant Improvement Initiative Data or include such Protected Power Plant Improvement Initiative Data in a license with other technology developed under this Power Plant Improvement Initiative Project and, in accordance with paragraph (k) of the Rights in Data-General clause, agrees to license such Protected Power Plant Improvement Initiative Data to responsible third parties. Such licenses shall include terms and conditions that are reasonable under the circumstances, including obligations of confidentiality.
- (f) The obligations of confidentiality and restrictions on publication and dissemination shall end for any Protected Power Plant Improvement Initiative Data:
 - (1) At the end of the protected period, as indicated in the Legend, i.e. [_____ years after completion of the operations phase of this Cooperative Agreement;]
 - (2) If the data becomes publicly known or available from other sources without a breach of the obligations of confidentiality with respect to the Protected Power Plant Improvement Initiative Data;
 - (3) If the same data is independently developed by someone who did not have access to the Protected Power Plant Improvement Initiative Data and such independently developed data is made available without obligations of confidentiality;
 - (4) _____ years, as agreed to by DOE, after a determination not to enter into the operations phase of this Agreement, or after the operations phase is terminated prior to completion; or
 - (5) If the Participant disseminates or authorizes another to disseminate such data without obligations of confidentiality.

3.11 U. S. Competitiveness

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology

be recognized in some appropriate manner. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.

SECTION IV -- LIST OF ATTACHMENTS

Attachment A -- Statement of Project Objectives

Attachment B -- Federal Assistance Reporting Checklist

Attachment C -- Budget Page(s)

Attachment [TBD] -- Recipient-Acquired Property

Attachment [TBD] -- Federally Owned Property -- Government Furnished

ATTACHMENT A -- STATEMENT OF PROJECT OBJECTIVES

[Insert the Statement of Project Objectives here. The format should be similar to the following.]

- A. Objectives
- B. Scope of Project
- C. Tasks to Be Performed
- D. Deliverables

The Recipient shall provide reports in accordance with the enclosed Federal Assistance Reporting Checklist and the instructions accompanying the Checklist. In addition to the reports identified on the Reporting Checklist, the Recipient shall provide the following:

[TBD]

FEDERAL ASSISTANCE REPORTING CHECKLIST

1. Awardee:	2. Identification Number:																																																																																																																
3. Report Submission Address: <i>The requested quantity of all required report deliverables shall be submitted to the following address:</i> <div style="text-align: center;"> NETL AAD DOCUMENT CONTROL BLDG. 921 U.S. DEPARTMENT OF ENERGY NATIONAL ENERGY TECHNOLOGY LABORATORY P.O. BOX 10940 PITTSBURGH, PA 15236-0940 </div>																																																																																																																	
4. Planning and Reporting Requirements: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 15%;">Form No.</th> <th style="width: 10%;">Freq.</th> <th style="width: 25%;">Number of Copies</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="padding: 5px;">A. PROGRAM/PROJECT MANAGEMENT</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Federal Assistance Milestone Plan</td> <td style="text-align: center; padding: 2px 5px;">DOE F 4600.3</td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Milestone Log</td> <td style="text-align: center; padding: 2px 5px;">DOE F 4600.3A</td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Federal Assistance Management Summary Report</td> <td style="text-align: center; padding: 2px 5px;">DOE F 4600.5</td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Federal Assistance Program/Project Status Report</td> <td style="text-align: center; padding: 2px 5px;">DOE F 4600.6</td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Financial Status Report</td> <td style="text-align: center; padding: 2px 5px;">SF-269 or SF-269A</td> <td style="text-align: center; padding: 2px 5px;">Q</td> <td style="text-align: center; padding: 2px 5px;">3</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Federal Cash Transaction Report</td> <td style="text-align: center; padding: 2px 5px;">SF-272</td> <td style="text-align: center; padding: 2px 5px;">Q</td> <td style="text-align: center; padding: 2px 5px;">3</td> </tr> <tr> <td colspan="4" style="padding: 5px;">B. TECHNICAL *(One paper copy and one PDF electronic file copy)</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Technical Progress Report</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">Q</td> <td style="text-align: center; padding: 2px 5px;">2*</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Topical Report</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">A</td> <td style="text-align: center; padding: 2px 5px;">2*</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Final Report</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">FG</td> <td style="text-align: center; padding: 2px 5px;">2*</td> </tr> <tr> <td colspan="4" style="padding: 5px;">C. ENVIRONMENTAL</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Hazardous Substance Plan</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">0</td> <td style="text-align: center; padding: 2px 5px;">3</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Hazardous Waste Report</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">FC</td> <td style="text-align: center; padding: 2px 5px;">3</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Environmental Compliance Plan</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">A</td> <td style="text-align: center; padding: 2px 5px;">3</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Environmental Monitoring Plan</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">A</td> <td style="text-align: center; padding: 2px 5px;">3</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Environmental Status Report</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">S</td> <td style="text-align: center; padding: 2px 5px;">3</td> </tr> <tr> <td colspan="4" style="padding: 5px;">D. PROPERTY</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Annual Report of Property in the Custody of Contractors</td> <td style="text-align: center; padding: 2px 5px;">F 580.1-8</td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> High Risk Property Report</td> <td style="text-align: center; padding: 2px 5px;">F 580.1-25</td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Report of Termination or Completion Inventory</td> <td style="text-align: center; padding: 2px 5px;">NETL F 580.1-9 and SF-120</td> <td style="text-align: center; padding: 2px 5px;">FC</td> <td style="text-align: center; padding: 2px 5px;">1</td> </tr> <tr> <td colspan="4" style="padding: 5px;">E. EXCEPTION</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Conference Record</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Hot Line Report</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">A</td> <td style="text-align: center; padding: 2px 5px;">2</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Journal Articles/Conference Papers and Proceedings</td> <td style="text-align: center; padding: 2px 5px;">None</td> <td style="text-align: center; padding: 2px 5px;">A</td> <td style="text-align: center; padding: 2px 5px;">2</td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Software</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px 5px;"><input type="checkbox"/> Other Bi-weekly E-mail Status Updates and actual equipment cost information on a quarterly basis</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Form No.	Freq.	Number of Copies	A. PROGRAM/PROJECT MANAGEMENT				<input type="checkbox"/> Federal Assistance Milestone Plan	DOE F 4600.3			<input type="checkbox"/> Milestone Log	DOE F 4600.3A			<input type="checkbox"/> Federal Assistance Management Summary Report	DOE F 4600.5			<input type="checkbox"/> Federal Assistance Program/Project Status Report	DOE F 4600.6			<input type="checkbox"/> Financial Status Report	SF-269 or SF-269A	Q	3	<input type="checkbox"/> Federal Cash Transaction Report	SF-272	Q	3	B. TECHNICAL *(One paper copy and one PDF electronic file copy)				<input type="checkbox"/> Technical Progress Report	None	Q	2*	<input type="checkbox"/> Topical Report	None	A	2*	<input type="checkbox"/> Final Report	None	FG	2*	C. ENVIRONMENTAL				<input type="checkbox"/> Hazardous Substance Plan	None	0	3	<input type="checkbox"/> Hazardous Waste Report	None	FC	3	<input type="checkbox"/> Environmental Compliance Plan	None	A	3	<input type="checkbox"/> Environmental Monitoring Plan	None	A	3	<input type="checkbox"/> Environmental Status Report	None	S	3	D. PROPERTY				<input type="checkbox"/> Annual Report of Property in the Custody of Contractors	F 580.1-8			<input type="checkbox"/> High Risk Property Report	F 580.1-25			<input type="checkbox"/> Report of Termination or Completion Inventory	NETL F 580.1-9 and SF-120	FC	1	E. EXCEPTION				<input type="checkbox"/> Conference Record	None			<input type="checkbox"/> Hot Line Report	None	A	2	<input type="checkbox"/> Journal Articles/Conference Papers and Proceedings	None	A	2	<input type="checkbox"/> Software				<input type="checkbox"/> Other Bi-weekly E-mail Status Updates and actual equipment cost information on a quarterly basis			
	Form No.	Freq.	Number of Copies																																																																																																														
A. PROGRAM/PROJECT MANAGEMENT																																																																																																																	
<input type="checkbox"/> Federal Assistance Milestone Plan	DOE F 4600.3																																																																																																																
<input type="checkbox"/> Milestone Log	DOE F 4600.3A																																																																																																																
<input type="checkbox"/> Federal Assistance Management Summary Report	DOE F 4600.5																																																																																																																
<input type="checkbox"/> Federal Assistance Program/Project Status Report	DOE F 4600.6																																																																																																																
<input type="checkbox"/> Financial Status Report	SF-269 or SF-269A	Q	3																																																																																																														
<input type="checkbox"/> Federal Cash Transaction Report	SF-272	Q	3																																																																																																														
B. TECHNICAL *(One paper copy and one PDF electronic file copy)																																																																																																																	
<input type="checkbox"/> Technical Progress Report	None	Q	2*																																																																																																														
<input type="checkbox"/> Topical Report	None	A	2*																																																																																																														
<input type="checkbox"/> Final Report	None	FG	2*																																																																																																														
C. ENVIRONMENTAL																																																																																																																	
<input type="checkbox"/> Hazardous Substance Plan	None	0	3																																																																																																														
<input type="checkbox"/> Hazardous Waste Report	None	FC	3																																																																																																														
<input type="checkbox"/> Environmental Compliance Plan	None	A	3																																																																																																														
<input type="checkbox"/> Environmental Monitoring Plan	None	A	3																																																																																																														
<input type="checkbox"/> Environmental Status Report	None	S	3																																																																																																														
D. PROPERTY																																																																																																																	
<input type="checkbox"/> Annual Report of Property in the Custody of Contractors	F 580.1-8																																																																																																																
<input type="checkbox"/> High Risk Property Report	F 580.1-25																																																																																																																
<input type="checkbox"/> Report of Termination or Completion Inventory	NETL F 580.1-9 and SF-120	FC	1																																																																																																														
E. EXCEPTION																																																																																																																	
<input type="checkbox"/> Conference Record	None																																																																																																																
<input type="checkbox"/> Hot Line Report	None	A	2																																																																																																														
<input type="checkbox"/> Journal Articles/Conference Papers and Proceedings	None	A	2																																																																																																														
<input type="checkbox"/> Software																																																																																																																	
<input type="checkbox"/> Other Bi-weekly E-mail Status Updates and actual equipment cost information on a quarterly basis																																																																																																																	
5. Frequency Codes and Due Dates: A - As required; see attached text for applicability. C - Change/revision, within 15 calendar days after event. FG - Final; within ninety (90) calendar days after the project period ends. FC - Final - End of Effort. M - Monthly; within twenty-five (25) calendar days after end of the report period. O - Once after award; within thirty (30) calendar days after award. Q - Quarterly; within thirty (30) calendar days after end of the calendar quarter or portion thereof. S - Semiannually; within thirty (30) calendar days after end of project year and project half-year. YF - Yearly; 90 calendar days after the end of project year. YP - Yearly Property - due 15 days after period ending 9/30.																																																																																																																	

6. SPECIAL INSTRUCTIONS:

The forms identified in the checklist are available at <http://www.netl.doe.gov/business/forms/forms.html>. Alternate formats are acceptable provided the contents remain consistent with the form. All **technical reports** submitted to the DOE **must** be accompanied by a completed and signed NETL F 510.1-5 addressing patent information.

GENERAL INSTRUCTIONS FOR THE PREPARATION AND SUBMISSION OF REPORTS

The Recipient shall prepare and submit (postage prepaid) the plans and reports indicated on the "Federal Assistance Reporting Checklist" to the addressee identified on the checklist. The level of detail the Recipient provides in the plans and reports shall be commensurate with the scope and complexity of the effort and shall be as delineated in the guidelines and instructions contained herein. The prime Recipient shall be responsible for acquiring data from any contractors or subrecipients to ensure that data submitted are compatible with the data elements which prime Recipients are required to submit to DOE.

2. FINANCIAL STATUS REPORT (STANDARD FORM 269 OR 269A)

This report is used for the Recipient to provide regular periodic accounting of project funds expended. The accounting may be on either a cash or accrual basis. Actual total expenditures and obligations incurred, but not paid, are reported for each reporting period for each major activity. They should correlate with those identified on the "Federal Assistance Milestone Plan" when the "Federal Assistance Milestone Plan" is required. Provision is made to identify the Federal and non-Federal share of project outlays for each identified activity.

3. REPORT OF FEDERAL CASH TRANSACTIONS (STANDARD FORM 272)

This report is used by DOE to monitor cash advanced to Recipients and to obtain disbursement information. The content of the report is prescribed in 10 CFR 600.152 for Institutions of Higher Education, Hospitals, Other Non-Profit Organizations and Commercial Organizations or 10 CFR 600.241 for States and Local Governments.

4. TECHNICAL REPORTS

CAUTION: Technical reports SHALL NOT include Limited Rights Data (such as restricted, proprietary or business sensitive information). Limited Rights Data shall be submitted in a separate appendix to the technical report. This appendix SHALL NOT be submitted in an electronic format but rather submitted in ONE ORIGINAL AND THREE (3) PAPER COPIES along with the paper version of the sanitized technical report deliverable. The appendix shall be referenced in, but not incorporated into, the sanitized technical report deliverable under the contract. In accordance with FAR 52.227-14, Rights in Data-General, the appendix must be appropriately marked and identified.

Further, if this award authorizes the awardee under the provisions of The Energy Policy Act of 1992 to request protection from public disclosure for a limited period of time of certain information developed under this award, technical reports SHALL NOT contain such Protected EAct Information. Such information shall be submitted in a separate appendix to the technical report that is suitable for release after the agreed upon period of protection from public disclosure has expired. The appendix shall be referenced in, but not incorporated into, the sanitized technical report deliverable under the contract. In accordance with the clause titled "Obligations as to Protected Energy Policy Act (EAct) Information," the appendix must be appropriately marked and identified.

All TECHNICAL REPORTS submitted to the DOE MUST be accompanied by a completed and signed NETL F 510.1-5, addressing potentially patentable information.

5. TECHNICAL PROGRESS REPORT (ANNUAL, QUARTERLY, AND SEMI-ANNUAL)

The body of the report should contain a full account of progress, problems encountered, plans for the next reporting period, and an assessment of the prospects for future progress.

The Technical Progress Report should include sufficient detail to allow the work to be reproduced by others. Results and reduced data shall be presented together with a discussion of the relevance of the findings. When experimental systems and/or procedures are being utilized for the first time, they shall be described in detail. This description shall contain detailed information on equipment and procedures utilized, as well as providing a rationale for their use. All data reduction and transformation methods shall be fully documented. For every fourth calendar quarter for quarterly reports or every second half year for semi-annual reports, the report should be expanded to provide for detailed information on the results of the past year, problems encountered, significant accomplishments, listing of publications, presentations, and approaches to be taken the following year.

Informational items in technical progress reports shall include:

Experimental Apparatus -- A comprehensive description, including dimensioned drawings or sketches, of the apparatus and associated diagnostic measurement equipment employed to perform the experimental research.

Experimental and Operating Data -- All experimental data acquired during the course of research including detailed characterization of the sample materials subjected to experimentation.

Data Reduction -- A complete description of the methods employed to transform raw measured data into a form usable for interpretation along with any assumptions or restrictions inherent in the method and the resultant reduced data.

Hypothesis and Conclusions -- Logic for drawing conclusions or developing hypotheses shall be clearly stated along with applicable assumptions or restrictions.

6. TOPICAL REPORT

These reports usually provide a comprehensive statement of the technical results of the work performed for a specific task or subtask of the Statement of Project Objectives, or detail significant new scientific or technical advances. If required, DOE shall review and approve the report outline prior to submission of the report.

7. FINAL TECHNICAL REPORT

The Final Report shall document and summarize all work performed during the award period in a comprehensive manner. It shall also present findings and/or conclusions produced as a consequence of this work. This report shall not merely be a compilation of information contained in subsequent quarterly, or other technical reports, but shall present that information in an integrated fashion, and shall be augmented with findings and conclusions drawn from the research as a whole.

8. SOFTWARE

Major pieces of computer software developed largely as a result of the performance of this effort shall be delivered to the Government shortly after development or at the completion of the effort, as appropriate. The software shall be delivered together with sufficient documentation concerning its development and use to permit future use by others, and to provide a firm basis for allowing modifications to be made in any subsequent development efforts. Unless otherwise specified, software shall be written in a standard computer language such as Fortran 77, operate on the VAS VMS version 5.1 operating system or an IBM PC-compatible personal computer running MS/DOS, and should not incorporate or be dependent on the use of proprietary software, except for standard off-the-shelf software.

9. GUIDELINES FOR ORGANIZATION OF TECHNICAL REPORTS

The following sections should be included (as appropriate) in technical reports in the sequence shown. Any section denoted by an asterisk is required in all technical reports.

TITLE PAGE* - The Title Page of the report itself must contain the following information in the following sequence:

Report Title

Type of Report (Quarterly, Semi-Annual, Annual, Topical, Final)

Reporting Period Start Date

Reporting Period End Date

Principal Author(s)

Date Report was Issued (Month [spelled out] and Year [4 digits])

DOE Award Number (e.g., DE-FG26-99NT12345) and if appropriate, task number

Name and Address of Submitting Organization (This section should also contain the name and

address of significant subcontractors or subrecipients who participated in the production of the report.)

DISCLAIMER* -- The Disclaimer must follow the title page, and must contain the following paragraph:

“This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.”

ABSTRACT* - should be a brief, concise summary of the report.

TABLE OF CONTENTS*

LIST(S) OF GRAPHICAL MATERIALS

INTRODUCTION

EXECUTIVE SUMMARY - this should be a well organized summary that highlights the important accomplishments of the research during the reporting period. It should be no less than one page and no more than two pages in length, and should be single spaced. This summary must be more comprehensive than the traditional “abstract.”

EXPERIMENTAL* - this should describe, or reference all experimental methods being used for the research. It should also provide detail about materials and equipment being used. Standard methods can be referenced to the appropriate literature, where details can be obtained. Equipment should be described only if it is not standard, or if information is not available thru the literature or other reference publications.

RESULTS AND DISCUSSION* - It is extremely important that this section includes enough relevant data, especially statistical data, to allow the project manager to justify the conclusions. With the relevant data, explain how the data was interpreted and how it relates to the original purpose of the research. Be concise in the discussion on how this research effort solved or contributed to solving the original problem.

CONCLUSION* - The conclusion should not simply reiterate what was already included in the “Results and Discussion” section. It should, however, summarize what has already been presented, and include any logical implications of how the successes are relevant to technology development in the future. This is extremely important, since “relevancy” continues to be a criteria of the program.

REFERENCES*

BIBLIOGRAPHY
LIST OF ACRONYMS AND ABBREVIATIONS
APPENDICES (IF NECESSARY)

Company Names and Logos -- Except as indicated above, company names, logos, or similar material should not be incorporated into reports.

Copyrighted Material -- Copyrighted material should not be submitted as part of a report unless written authorization to use such material is received from the copyright owner and is submitted to DOE with the report.

Measurement Units -- All reports to be delivered under this instrument shall use the SI Metric System of Units as the primary units of measure. When reporting units in all reports, primary SI units shall be followed by their U.S. Customary Equivalents in parentheses ().

The Recipient shall insert the text of this clause, including this paragraph, in all subcontracts under this award.

Note: SI is an abbreviation for "Le Systeme International d'Unites."

10. ELECTRONIC MEDIA STANDARD FOR PREPARATION OF TECHNICAL REPORTS

FILE FORMAT

Production of high-quality, electronic documents is dependent on the quality of the input that is provided. Thus, the Recipient shall submit one good quality paper copy using either permanent or alkaline paper plus an electronic version of each technical report.

ELECTRONIC REPORTS SHALL BE SUBMITTED IN THE ADOBE ACROBAT PORTABLE DOCUMENT FORMAT (PDF). ELECTRONIC REPORTS SUBMITTED IN A FORMAT OTHER THAN ADOBE WILL BE RETURNED AND THE REPORT CONSIDERED DELINQUENT.

Each report shall be an integrated file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts.

SUBMISSION FORMAT

The electronic file(s) shall be submitted via diskette or CD-ROM. Diskettes or CD-ROMs must be labeled as follows:

DOE Award Number
Type/Frequency of Report(s)
Reporting Period (if applicable)
Name of submitting organization
Name, phone number and fax number of preparer

Diskettes -- Diskettes must be 3.5" double-sided, high-density (1.4 M Byte capacity). If file compression software is used to transmit a PDF file spanning more than one diskette, PKZIP from PKWare, Inc., is the required compression software. State the number of diskettes in the set (e.g., 1/3)

CD-ROM -- The electronic file(s) may be submitted on an ISO9660-format CD-ROM.

FILE NAMING

In naming the electronic file, the Recipient shall use the standard eight-character naming convention for the main file name, and the three character extension applicable to the software use, e.g., .pdf for Adobe.

For the main file name, the first five characters are the last five digits from the award number; e.g., for Award Number DE-FG26-97NT12345, the first five characters are 12345.

The next character represents the technical report and will always be designated as “R”.

The remaining two characters indicate the chronological number of the particular type of report; e.g., Quarterly Technical Progress Reports for a 5-year award are numbered R01 through R20. Thus, the main file name for the sixth Quarterly Technical Progress Report under Award No. DE-FG26-99NT12345 would be 12345R06.PDF. If monthly, quarterly, annual, and a final technical report are required, the numbers would run from R01 through R86 (60 monthly reports, 20 quarterly reports, 5 annual reports, and 1 final report).

11. ENVIRONMENTAL

In response, in part, to the requirements of the National Environmental Policy Act of 1969 (NEPA) and other related environmental statutes, the National Energy Technology Laboratory (NETL) requires the submission of various documents that assess the environmental aspects and projected impacts of all of its proposed actions. These documents may include the following: (1) Hazardous Substance Plan, (2) Hazardous Waste Report, (3) Environmental Compliance Plan, (4) Environmental Monitoring Plan, and (5) Environmental Status Reports.

The environmental information provided in these documents will enable NETL to fulfill its responsibilities under NEPA (additional information about the requirements of the National Environmental Policy Act can be found in the DOE NEPA Compliance Guide and 10 CFR 1021) and to monitor the Recipient's compliance with other environmental regulations. The implementation of any task associated with a proposed action will be dependent upon DOE completing necessary NEPA documentation. Therefore, to minimize the risk of project delays, it is imperative that these reports be submitted in a timely manner.

The information contained herein specifies the basic environmental requirements for this award, but it is not to be interpreted as containing all necessary information for any given project. Likewise, certain aspects of the requirements may not be applicable. Accordingly, the level of information provided should be sufficient for DOE to assess the environmental implications of the proposed action.

12. HAZARDOUS SUBSTANCE PLAN

The Recipient shall submit a Hazardous Substance Plan not later than thirty (30) days after initial award. The Plan shall specifically identify each Hazardous Substance (as defined under 40 CFR 261, Subpart D, entitled “Lists of Hazardous Wastes”) anticipated to be purchased, utilized or generated in the performance of this award. For each such Hazardous Substance identified, the Plan shall specifically provide the following information:

- Description of Substance/Chemical
- EPA Hazardous Waste Number
- EPA Hazard Code
- Anticipated Quantity to be purchased, utilized or generated
- Anticipated Hazardous Waste Transporter
- Anticipated Hazardous Waste Disposal Facility Contractor and Location (City/Municipality, State)
- Anticipated Treatment Method

13. HAZARDOUS WASTE REPORT

The Recipient shall submit a Hazardous Waste Report at the completion of award performance. The Report shall specifically identify each Hazardous Waste (as defined under 40 CFR 261, Subpart D, entitled “Lists of Hazardous

Wastes”) actually utilized, or generated in the performance of this award. For each such Hazardous Waste identified, the Report shall specifically provide the following information:

- Description of Substance/Chemical
- EPA Hazardous Waste Number
- EPA Hazard Code
- Actual Quantity Disposed
- Actual Hazardous Waste Transporter
- Actual Hazardous Waste Disposal Facility Contractor and Location (City/Municipality, State)
- Actual Disposal Date
- Actual Treatment Method

The Hazardous Waste Report is intended as a final reconciliation of anticipated versus actual Hazardous Substances purchased, utilized, or generated in the performance of this award.

14. ENVIRONMENTAL COMPLIANCE PLAN

The Environmental Compliance Plan (ECP) shall be submitted within thirty (30) days of award and should outline an approach to implementing an environmental monitoring and reporting strategy. This strategy should include plans for submitting a Quality Assurance/Quality Control Plan and Pollution Prevention Plan (if an ECP is required, the format of the QA/QC Plan and Pollution Prevention Act will be determined in conjunction with the NETL environmental staff), conducting environmental monitoring of the proposed action and submitting Environmental Status Reports. The ECP should also address any concerns and/or deviations associated with the reporting and monitoring documents.

SUGGESTED FORMAT FOR ENVIRONMENTAL COMPLIANCE PLAN (ECP):

- I. SUMMARY OF PROPOSED PROJECT
- II. FEDERAL REGULATORY COMPLIANCE (Discuss how each of the following will be complied with, if applicable.)
 - A. National Historic Preservation Act
 - B. Endangered Species Act
 - C. Fish and Wildlife Coordination Act
 - D. Floodplain/Wetlands Regulations
 - E. Coastal Zone Management Act
 - F. Farmland Protection Policy Act
 - G. American Indian Religious Freedom Act
 - H. Wild and Scenic Rivers Act
 - I. Resource Conservation & Recovery Act
 - J. Comprehensive Environmental Response, Compensation and Liability Act
 - K. Clean Air Act
 - L. Clean Water Act
 - M. Pollution Prevention Act
- III. STATE AND LOCAL REGULATORY COMPLIANCE (Discuss how any state and local regulations will be complied with.)

15. ENVIRONMENTAL MONITORING PLAN

IF DOE's analysis of the potential environmental impacts of the proposed action identifies a need for environmental monitoring, the Recipient will also submit a draft Environmental Monitoring Plan (EMP). After consultation with

DOE, the draft EMP will be revised, as necessary, and a final EMP will be prepared. The EMP may be revised as the project dictates.

The EMP should evaluate air, land, and water resources, and waste production, using three specific types of monitoring:

- A. Compliance Monitoring,
- B. Unregulated Pollutant Monitoring, and, if necessary,
- C. NEPA-related Monitoring.

Compliance monitoring, i.e., environmental and health monitoring required by Federal, State, and local regulatory agencies, should detail the location, frequency, duration, and substances being monitored. All necessary applications, permits, and licenses should be identified.

Unregulated pollutants, both the amount and type of each, should be monitored. This includes those pollutants (a) not currently regulated by State or Federal laws but for which new regulations are expected in the near future; (b) which may cause environmental or health concerns based on hazardous/toxic compound lists; and (c) which are expected in discharge streams based on test data or process chemistry.

Finally, NEPA-related monitoring should be implemented as necessary. It should identify and/or confirm the impacts of the substances produced and performance of the specific technologies as predicted in the NEPA document. It should also include reporting on any mitigation action identified in the Finding of No Significant Impact or Record of Decision as a condition of approval of the proposed action (reported annually).

16. ENVIRONMENTAL STATUS REPORT

After approval of the comprehensive EMP, and as deemed necessary by the DOE Project Manager, information from environmental monitoring should be submitted in the form of Environmental Status Reports (ESRs). The necessity of these reports will depend on the size and nature of the project; they will be required quarterly.

The data reported in the ESRs will ensure that project impacts (a) do not violate applicable environmental regulations and (b) are not detrimental to human health or the environment. The information will also provide a database that can be utilized to mitigate environmental problems associated with commercializing any proposed technologies.

SUGGESTED FORMAT FOR ENVIRONMENTAL STATUS REPORTS

I. SUMMARY OF MONITORING PERFORMED (Compliance and Supplemental Monitoring)

A. MONITORING PARAMETERS

- 1. Location
- 2. Stage of Project (e.g., preconstruction, operational, etc.)
- 3. Source to be Monitored (e.g., stack emissions)
- 4. Method of Monitoring

B. DATA ANALYSIS

- 1. Identification/characterization of emissions, effluents, etc. and their concentration
- 2. Identification of problem areas/non-compliance
- 3. Suggestions for modifications/changes to the system
- 4. Recommendations to revise Monitoring Plan

II. PERMIT COMPLIANCE STATUS

- A. Attach copies of compliance reports, analyses, correspondence between the Recipient and the appropriate regulatory agencies.
- B. Attach copies of all manifests, shipping documents, etc., pertaining to the disposal of wastes generated from the project.

17. PROPERTY REPORTS

The NETL Property Handbook entitled "Management of Government Property in the Possession of Contractors," contains forms, instructions, and suggested formats for submission of property reports. This handbook can be found at <http://www.netl.doe.gov/business/index.html>.

18. REPORT OF TERMINATION OR COMPLETION INVENTORY (NETL F 580.1-9 AND SF-120)

This report submitted on the NETL F 580.1-9 is due immediately upon completion or termination of the award. The SF-120 is also required if there is Government-furnished property involved. The Recipient is required to perform and cause each subcontractor to perform a physical inventory, adequate for disposal purposes, of all Government property applicable to the award.

19. HOT LINE REPORT

The "Hot Line Report" may be used to report a major breakthrough in research, development, or design; an event causing a significant schedule slippage or cost growth; an environmental, safety and health violation; achievement of or failure to achieve an important technical objective; or any requirement for quickly documented direction or redirection. The report shall be submitted by the most rapid means available, usually electronic, and should confirm telephone conversations with DOE representatives. Identification as a "Hot Line Report" serves notice at each link in the delivery chain that expedition in handling is required. Unless otherwise agreed by the parties involved, DOE is expected to take action and respond in a similarly timely manner. The report should include:

1. Recipient's name and address;
2. Award title and number;
3. Date;
4. Brief statement of problem or event;
5. Anticipated impacts; and
6. Corrective action taken or recommended.

Hot line reports shall document the incidents listed below:

1. Any single fatality or injuries requiring hospitalization of five or more individuals is to be immediately reported.
2. Any significant environmental permit violation is to be reported as soon as possible, but within 24 hours of the discovery of the incident.
3. Other incidents that have the potential for high visibility in the media are to be reported as quickly as possible, but within 24 hours following discovery.
4. Any failure resulting in damage to Government-owned equipment in excess of \$50,000 is to be reported as quickly as possible, but within 24 hours of the discovery of the failure.
5. Any unplanned event which is anticipated to cause a schedule slippage or cost increase significant to the project is to be reported within 24 hours.
6. Any verbal or written Notice of Violation of any Environmental, Safety, and Health statutes arising from the performance of this award is to be immediately reported.
7. Any accidental spill or release which is in violation of any Environmental, Safety, and Health statutes arising from the performance of this award is to be immediately reported, but within 24 hours of the discovery of the accident.

8. Any incident which causes a significant process or hazard control system failure, or is indicative of one which may lead to any of the above defined incidents, is to be reported as soon as possible, but within 5 days of discovery.

The requirement to submit Hot Line Reports for the incidents identified in 1, 2, 3, 6, or 7 is for the sole purpose of enabling DOE officials to respond to questions relating to such events from the media and other public.

When an incident is reported in accordance with 4, 5, 6, 7, or 8, the Recipient shall conduct an investigation of its cause and make an assessment of the adequacy of resultant action. A written report is required no later than ten (10) calendar days following the incident and shall include an analysis of the pertinent facts regarding the cause, and a schedule of the remedial events and time periods necessary to correct the action.

When an event results in the need to issue a written or verbal statement to the local media, the statement is to be cleared first; if possible, and coordinated with NETL Communications and Public Affairs Division, the Contracting Officer Representative (COR) and the Contracting Officer.

20. JOURNAL ARTICLES, CONFERENCE PAPERS AND PROCEEDINGS GENERATED BY LARGE BUSINESSES FOR DOE REVIEW

The Recipient shall submit to DOE for review and approval all documents generated by the Recipient, or any subcontractor, which communicate the results of scientific or technical work supported by DOE under this award, whether or not specifically identified in the award, prior to submission for publication, announcement, or presentation. Such documents include journal articles, conference papers and proceedings, etc. Each such document shall be accompanied by a properly completed NETL Form 510.1-5, "Request for Patent Clearance for Release of Contracted Research Documents."

The Recipient shall simultaneously submit a draft version of the document to the DOE COR and the DOE Patent Counsel Office prior to the publication, presentation, or announcement. The document submitted to the DOE Patent Counsel shall be accompanied by a completed NETL Form 510.1-5. The DOE COR and DOE Patent Counsel shall review the draft version of the document and notify the Recipient of approval or recommended changes. The approved final version shall be submitted to the NETL AAD Document Control Coordinator.

The following information shall be provided for conference papers and proceedings, etc.

- Name of conference
- Location of conference (city, state, and country)
- Date of conference (month/day/year)
- Conference sponsor

21. JOURNAL ARTICLES, CONFERENCE PAPERS AND PROCEEDINGS GENERATED BY A SMALL BUSINESS OR NONPROFIT ORGANIZATION FOR DOE REVIEW

The Recipient shall submit to DOE for review and approval all documents generated by the Recipient, or any subcontractor, which communicate the results of scientific or technical work supported by DOE under this award, whether or not specifically identified in the award, prior to submission for publication, announcement, or presentation. Such documents include journal articles, conference papers and proceedings, etc. Each such document shall be accompanied by a properly completed NETL Form 510.1-5, "Request for Patent Clearance for Release of Contracted Research Documents."

The Recipient shall submit a draft version of the document to the COR prior to the publication, presentation, or announcement. The COR shall review the draft version of the document and notify the Recipient of approval or

recommended changes. The final version, along with a completed NETL Form 510.1-5, shall be submitted to the NETL AAD Document Control Coordinator.

The following information shall be provided for conference papers and proceedings, etc.

- Name of conference
- Location of conference (city, state, and country)
- Date of conference (month/day/year)
- Conference sponsor

22. JOURNAL ARTICLES, CONFERENCE PAPERS AND PROCEEDINGS GENERATED BY A UNIVERSITY FOR DOE REVIEW

The Recipient shall submit to DOE for review and comment all documents generated by the Recipient, or any subcontractor, which communicate the results of scientific or technical work supported by DOE under this award, whether or not specifically identified in the award, prior to submission for publication, announcement, or presentation. Such documents include journal articles, conference papers and proceedings, etc. Each such document shall be accompanied by a properly completed NETL Form 510.1-5, "Request for Patent Clearance for Release of Contracted Research Documents."

The Recipient shall submit a draft version of the document to the COR prior to the publication, presentation, or announcement. The COR shall review the draft version of the document and notify the Recipient of recommended changes. The final version, along with a completed NETL Form 510.1-5, shall be submitted to the NETL AAD Document Control Coordinator.

The following information shall be provided for conference papers and proceedings, etc.

- Name of conference
- Location of conference (city, state, and country)
- Date of conference (month/day/year)
- Conference sponsor

Attachment C -- Budget Pages

[Insert the files from K:\common\addata\form\d4620.1 (Budget Page) and/or K:\common\addata\form\er_f4600.4 (Grant Application Project Period Summary) if it is anticipated that the award is to be made to educational or nonprofit organizations.]

[Insert the either the DOE Form 424a or the DOE 4600.4 if it is anticipated that an award will be made to commercial organizations.]

Attachment D -- Instructions for Completion of Invoices

(a) Voucher Form (SF 270)

In requesting reimbursement, recipient shall use Standard Form 270 (Request for Advance or Reimbursement), and a Statement of Cost providing detailed backup to support the requested Federal Share. Electronic versions of the SF270 and the NETL F4220.50 can be found on the NETL web site at <http://www.netl.doe.gov/business/forms/forms.html>. The Statement of Cost shall be supported by the information contained in Paragraph (c) below. Acceptable substitutes for the forms (which provide the same necessary information) may be used.

All invoices shall include the following information:

- (1) Name and address of recipient/vendor
- (2) Invoice date
- (3) Award number or other authorization for delivery of property or service
- (4) Description, price and quantity of property and services actually delivered or rendered
- (5) Shipping and payment terms
- (6) Name (where practicable), title, phone number and complete mailing address of responsible official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment)
- (7) Name (where practicable), title, phone number and complete mailing address of the person to be notified in the event of a defective invoice.
- (8) Other substantiating documentation or information as required by the award.

(b) Statement of Cost

The SF 270 shall be completed so as to make due allowances for the Recipient's cost accounting system. The costs claimed shall be only those recorded costs (including cost sharing) which are authorized for billing by the payment provisions of this award. Any cost sharing or in-kind contributions incurred by the Recipient and/or third party during the billing period must be included in the invoice and adequately supported. Indirect rates claimed shall be billed in accordance with the DHHS rate agreement. The Certification (block 11) must be signed by a responsible official of the Recipient.

(c) Supporting Documentation

Direct costs (e.g., labor, equipment, travel, supplies, etc.) claimed for reimbursement on the Statement of Cost must be adequately supported. The level of detail provided must clearly indicate where the funds were expended. For example, support for labor costs must include the labor category (e.g., program manager, senior engineer, technician, etc.) the hourly rate, and the labor cost per category; equipment costs must be supported by a list of the equipment purchased, along with the item's cost; supporting data for travel must include the destination of the trip, number and labor category of travelers, transportation costs, per diem costs, and purpose of the trip; and supplies should be categorized by the nature of the items (e.g., office, lab, computer, etc.) and the dollar amount per category.

Indirect rates used for billings must be clearly indicated, as well as their basis of application. When the cognizant Administrative Contracting Officer (ACO) or auditor approves a change in the billing rates, include a copy of the approval.

(d) Billing Period

Vouchers shall be submitted no more frequently than monthly (unless prior written consent of the Contracting Officer for more frequent billing is obtained). The period of performance covered by vouchers should be the same as covered by any required monthly technical progress reports and/or monthly cost reports.

(e) Payment Method

In accordance with Mandatory Information for Electronic Funds Transfer Payment, payment under this award will be made utilizing the Automated Clearing House (ACH) network. The payment system is specifically referred to as "Vendor Express."

(f) Defective Invoices

Invoices that are determined to be defective, and therefore not suitable for payment, shall be returned to the Recipient as soon as practicable, specifying the reason(s) why the invoice is not proper.

(g) Status of Payments

The Oak Ridge Financial Service Center (ORFSC) has a system via Internet, in which contractors can request information about payments by invoice, by contract number, and/or by paid date. The system is called Vendor Inquiry Payment Electronic Reporting System (VIPERS) and is available to recipients at the following web site: <http://finweb.oro.doe/vipers.htm>. Recipients must have a federal tax identification number (TIN) and then obtain a personal identification number (PIN) to access the system.

Attachment [TBD] -- Recipient Acquired Property

[Contract Specialist shall identify exempt property and/or equipment under this attachment]

EXEMPT

[Insert exempt property which has an acquisition cost less than \$5,000. DO NOT include expendable property (i.e., paper, pens, pencils, gases, chemicals, etc.)]

EQUIPMENT

[Insert equipment with an acquisition cost greater than \$5,000]

Attachment [TBD] -- Federally Owned Property -- Government Furnished

SECTION VII - ATTACHMENTS

ATTACHMENT B

MODEL REPAYMENT AGREEMENT

(End of text for this page)

MODEL REPAYMENT AGREEMENT

ARTICLE I. GENERAL OBJECTIVE

The purpose of this agreement is to set forth the terms and conditions under which _____ (defined herein as the “Repayment Participant”) shall repay to DOE an amount up to, but not to exceed, the DOE share paid under Cooperative Agreement No. DE-NT01-____.

ARTICLE II. DEFINITIONS

“Cooperative Agreement” means the financial assistance award made by the United States Department of Energy (DOE) to the Participant, Instrument Number _____ on _____, 200_ and subsequent amendments.

“DOE share” means the portion of the total project costs paid by DOE under the Cooperative Agreement.

“Repayment Participant” means [INSERT NAME OF ORGANIZATION SIGNING THE REPAYMENT AGREEMENT] and its successors and assigns.

“Total project costs” means the total amount of allowable direct and indirect costs incurred and paid, in part, by DOE under the Cooperative Agreement.

“United States” means any of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and any territory or possession of the United States.

ARTICLE III. TERM OF THIS REPAYMENT AGREEMENT

This Repayment Agreement shall become effective on the date specified in the Cooperative Agreement as the end of Stage 3 (Operation). However, if the Repayment Participant unilaterally withdraws or terminates its participation under the Cooperative Agreement, or the project is terminated in accordance with Paragraph 2.35 (Termination) of the Cooperative Agreement or terminated due to DOE’s disapproval of a continuation application in accordance with Paragraph 2.9 (Continuation Application) of the Cooperative Agreement, this Repayment Agreement shall become effective on the date the Cooperative Agreement is terminated. This Repayment Agreement shall expire 20 years from its effective date or on the date the entire DOE share has been repaid, whichever occurs first. This Repayment Agreement may be terminated upon a determination by the Secretary of

Energy or designee that repayment places the Repayment Participant at a competitive disadvantage in domestic or international markets.

ARTICLE IV. DEMONSTRATION TECHNOLOGY

For purposes of this Repayment Agreement, the “Demonstration Technology” shall consist of [DOE and the Participant will agree on this description].

ARTICLE V. AMOUNT OF REPAYMENT

The amount of the Repayment Participant’s repayment obligation shall be based only on the sale, lease, or licensing of the Demonstration Technology, as defined in Article IV, in applications and for use at facilities located worldwide. The amount of repayment shall be based upon the revenues from the sum of one or both of the following sources during commercialization of the Demonstration Technology:

<u>Repayment Amount</u>	<u>Revenue Source</u>
0.5%	Gross revenues from equipment sales/leases
5.0%	Royalties and licensing fees

For purposes of determining the amount of repayment, commercialization shall be deemed to have begun on the effective date of this Repayment Agreement or [INSERT DESCRIPTION OF TRIGGERING EVENT(S) WHICH DEFINE THE GRACE PERIOD: E.G., ALL SALES AFTER THE 3RD UNIT OF THE DEMONSTRATION TECHNOLOGY], whichever occurs later.

(A) Sales/Leases of Equipment

The Repayment Participant shall pay DOE an amount equal to 0.5% of the gross revenues from the sale or lease of equipment manufactured, fabricated, or assembled as a result of commercialization of the Demonstration Technology. The Repayment Participant shall include in all contracts or agreements with any entity which is involved, directly or indirectly, in manufacturing, selling, leasing, or licensing the use of Demonstration Technology equipment, a provision requiring that sales and leases of such equipment and associated revenue be reported on an annual basis to the Repayment Participant. A list of entities (including name, address, and telephone number of a responsible official) subject to this reporting requirement is provided in Attachment A and shall be updated, as necessary, by the Repayment Participant.

(B) License Fees

The Repayment Participant shall pay DOE an amount equal to 5.0% of the gross revenues from license fees paid for use of the Demonstration Technology. The Repayment Participant shall include in all contracts or agreements with any entity which acquires the right to license the use of the Demonstration Technology, a provision requiring that all such licenses and sub-licenses and associated revenues be reported on an annual basis to the Repayment Participant. A list of entities (including name, address, and telephone number of a responsible official) subject to this reporting requirement is provided in Attachment B and shall be updated, as necessary, by the Repayment Participant.

(C) Alternative Sources

[INSERT ANY PERTINENT PROVISIONS DURING NEGOTIATIONS.]

ARTICLE VI. SCHEDULE OF REPAYMENTS

Payments to DOE shall be calculated on an annual basis, and shall be due within 60 days after each one-year period following the effective date of this Repayment Agreement.

ARTICLE VII. REPORTING AND RECORD RETENTION REQUIREMENTS

(A) Annual Report to DOE

Within 60 days after the end of each one-year period, the Repayment Participant shall submit a written report to DOE which, for the one-year period just elapsed, provides the applicable data described below:

- (1) The total dollar amount of sales and leases of Demonstration Technology equipment;
- (2) Quantities and descriptions of Demonstration Technology equipment sold and leased;
- (3) The total dollar amount of license fees paid for use of the Demonstration Technology;
- (4) Quantities and descriptions of Demonstration Technology transactions under which license fees were paid;
- (5) The total amount of revenue reported by each entity identified in Attachments A and B;
- (6) Sum of the total amounts of gross revenues from each of the sources described in Article V, Sections A and B; and

(7) The total amount owed or paid to DOE, and the amount of the DOE share remaining to be paid in succeeding years under this Repayment Agreement.

(B) Period of Retention

With respect to each annual report to DOE, the Repayment Participant shall retain, for the period of time prescribed in this paragraph, all related financial records, supporting documents, statistical records, and any other records the Participant reasonably considers to be pertinent to this Repayment Agreement. The period of required retention shall be from the date each such record is created or received by the Participant until three years after one of the following dates, whichever is earlier: the date the related annual report is received by DOE; or the date this Repayment Agreement expires, or the final payment to DOE is received. If any claim, litigation, negotiation, investigation, audit, or other action involving the records starts before the expiration of the three-year retention period, the Participant shall retain the records until such action is completed and all related issues are resolved, or until the end of the three-year retention period, whichever is later. The Repayment Participant shall not be required to retain any records which have been transmitted to DOE by the Repayment Participant.

(C) Authorized Copies

Copies made by microfilm, photocopying, or similar methods may be substituted for original records. Records originally created by computer may be retained on an electronic medium, provided such medium is “read only” or is protected in such a manner that the electronic record can be authenticated as an original records

(D) Access to Records

DOE and the Comptroller General of the United States, or any of their authorized representatives, shall have the right of access to any books, documents, papers, or other records (including those on electronic media) which are pertinent to this Repayment Agreement. The purpose of such access is limited to the making of audits, examinations, excerpts, and transcripts. The right of access described in this paragraph shall last as long as the Repayment Participant retains records which are pertinent to this Repayment Agreement.

(E) Restrictions on Public Disclosure

The Federal Freedom of Information Act (5 U.S.C. Section 552) does not apply to records the Repayment Participant is required to retain by the terms of this Repayment Agreement. Unless otherwise required by law or a

court of competent jurisdiction, the Repayment Participant shall not be required to disclose such records to the public.

(F) Flow Down of Records, Retention, and Access Requirements

In any contract or other agreement subject to the reporting requirements described in Article V, Sections A and B, the Repayment Participant shall include clauses substantially similar to the records retention and access requirements set forth in sections (B) and (D) of this Article.

ARTICLE VIII. COMMERCIALIZATION

The Repayment Participant agrees to exercise its best efforts to commercialize, or to assist others to commercialize, domestically and worldwide [INSERT THE NAME OF THE TECHNOLOGY].

ATTACHMENTS

- A. Purchasers and Lessees of Demonstration Technology Equipment
- B. Entities Required to Pay License Fees.